BEHAVIOUR PATTERN OF CHEST SYMPTOMATICS IN RURAL AND URBAN POPULATIONS IN KARNATAKA

INSTITUTE OF COMMUNICATION, OPERATIONS RESEARCH AND COMMUNITY INVOLVEMENT
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With Best Compliments
to
Dr. Thelma & Ravi Narayan
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S.S.NAIR
Hon.Chief Coordinator
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LIST OF ABBREVIATIONS

BC	Backward Classes
CO	Cough
CS	Chest symptomatic
DTC	District Tuberculosis Centre
F	Female
FI	Field Investigator
GH	Government Hospital
GHF	General Health Facility
HF	Health Facility
HH	Household
HI	Health Institution
HOH	Head of Household
ICMR	Indian Council of Medical Research
ICORCI	Institute of Communication Operations Research and Community Involvement, Bangalore
ILL	Illiterate
M	Male
NA	Not Available
NC	Not Calculated
NGH	Non-Government Hospital
NGO	Non-Government Organisation
No.	Number
NTP	National Tuberculosis Programme
OG	Out Growth
OS	Other Symptoms
P	Percentage
PHC	Primary Health Centre
PHI	Peripheral Health Institution
PMP	Private Medical Practitioner
PPS	Probability Proportional to Size
PR	Prevalance Rate
RNTCP	Revised National Tuberculosis Control Programme
SC/ST	Scheduled Caste / Scheduled Tribe
SSC	Secondary School Certificate
SHF	Specialised Health Facility
SP	Sick Person
TB	Tuberculosis
UA	Urban Agglomeration
URI	Upper Respiratory Infection
WHO	World Health Organisation

GUIDE TO READERS

A report of this size and nature is not easy to study or peruse. Keeping in view the interests of different groups of persons, it may not be out of place to offer a few suggestions about reading this report. For the use of top executives who are connected with policy formulation and planning of TB programmes an Executive Summary has been provided. They may also benefit from a perusal of Chapters 6 & 7, particularly Chapter 7. For those who would like to have more detailed information in a nut shell, a longer summary has been provided. At the other extreme, interested research workers and persons connected with field implementation of the TB programme and its evaluation could benefit from the detailed presentation in second and third Chapters. They could make use of the data presented to formulate hypotheses for operations research which are crucial for the success of the TB programme and its evolution to meet changes and/or variations in the situation in different areas. Persons interested in making comparison of the two districts in which the study was conducted may find Chapter 4 useful. The overall picture of Karnataka and rural-urban differences are presented in Chapter 5. Chapters 6 and 7 may be of interest to many types of readers who are interested in making the TB programme a success.

EXECUTIVE SUMMARY

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- **Study of behaviour pattern of chest symptomatics (CS) in the community is of great importance because efficiency of both case finding and case holding of TB under the TB programme is linked with this**. Such a study (funded by WHO) was conducted in 1997 in Mysore and Raichur districts of Karnataka. **Total study population was over 40,000**. Comparison with 1991 census showed that the study populations were representative of rural and urban populations in the two districts.

- Non-sick households (HHs) in Mysore (25%) were double of that in Raichur. **About 25% of population was sick. CS formed 1.2% - 1.4% in Mysore and 1.1% in Raichur. This rate was 1.7% in rural Mysore and 0.8% in urban Mysore**. There was no rural-urban difference in Raichur. This rate was higher among males. Nearly 40% of CS were females.

- More than 90% of sick persons (SPs) and CS contacted some health facility (HF). **While 78% of SPs contacted primary level HF, only 55% of persons with cough for more than three weeks did so**.

- One third of CS took only one action, 28% two actions and 17% three actions. First action was taken within 15 days by about 75% of Mysore CS and about 55% of Raichur CS. About 15% of Mysore CS and 25% of Raichur CS took action only after 30 days. Average interval between onset of symptoms and action by urban CS was more than double of that by rural CS.

- **About 65% of CS had contacted private medical practitioner (PMP) for first action. Popularity of PHC was quite low (only 20% contacting it)**. Even for third action, about 45% of CS still contacted PMP. Vast majority (80% in Mysore and 95% in Raichur) contacted only general HF. About 50%

of Raichur CS travelled less than 1 km compared to less than 10% of Mysore CS, for first action.

- **PHC, which was expected to do sputum examination for all CS, had done so for only 1% of contacts made by CS**. All HFs together had ordered sputum examination for only 23% of the contacts made by CS. Only for 64% of examined, results were told.

- In all 60 CS stated that they were told that they were suffering from TB. This shows a case yield of 12% out of rural CS and 23% out of urban CS. **None of these 60 cases were diagnosed by DTC**. Overall, 47% were diagnosed during first action and 37% during second action. About two-thirds were diagnosed within 90 days of onset of symptoms.

- Averages for direct, indirect and total costs incurred by urban CS were all higher than those by rural CS. About 60% of all CS had not incurred any indirect cost, **making direct cost the major component of total cost. Major component of direct cost was cost of medicines**. Cost for consultation was far lower and cost of travel a poorer third.

- Influence of sex, age, family size, type of family, highest education level in HH, religion and caste and occupation on (a) prevalence of symptoms other than cough, cough and CS, (b) number of actions taken by CS, (c) type of HF contacted by CS and (d) cost were studied. **Though some clear differences and trends were observed, particularly for age and highest education level in HH, no uniform patterns emerged. A study covering larger number of CS will clarify the situation**.

- Vast majority of CS have symptoms because of diseases other than TB. Relief from these will reduce the number of CS. This and lack of uniformity in earlier studies with regard to definition of CS, type of investigators used, recall

period for symptoms and other aspects make comparisons with other studies inappropriate. Different studies show prevalence rate for all sickness varying from 10% to 40% and for CS from 1% to 18%. Proportion not taking action varied from 3% to 50% for all sickness and from 14% to 50% for CS. Lower percentages for the latter were generally from recent studies. This might have resulted from a steep increase in use of PMP from 10% to 60%.

- Comparison with other studies shows that the **present study has covered many more aspects and gives a more exhaustive picture of behaviour pattern of CS** (and of persons with other symptoms), in rural and urban populations.

- **With comparatively better availability of government HFs, Mysore CS had to travel longer distances to get fewer cases diagnosed and that too after longer intervals from onset of symptoms. This could lead to a paradoxical conclusion that having better availability of government HFs is a serious disadvantage for CS**.

- Present study has not only confirmed that the **major burden of providing curative services is borne by PMPs** but has also shown that this could be as high as 67%. This poses a serious problem because PMPs make clinical diagnosis of TB without examining sputum. **They should be made aware that both (a) wrong diagnosis and (b) improper anti-TB treatment are social crimes**.

- **PHC, the main pillar of the TB programme, was contacted by only 16% of CS. PHC, which was expected to examine sputum for all CS had ordered sputum examination for only 1% of contacts made by CS. Out of 60 cases reported in the study, only 3% were diagnosed by PHC** (that too without sputum examination). Enquiries regarding cost incurred had revealed that CS had incurred cost for services by PHC. The myth of free

service at PHC is perhaps well known to all but bypassed in discussions regarding improvement of services. **All these question the relevance of PHC. Either a complete restructuring of PHC to make it a real pillar for the TB programme or finding an alternative pillar is essential**.

- **Contribution of DTC to providing services to CS was almost nil even in urban areas, eventhough two of the four towns in the study had DTC**. There was **40% reduction in the number of CS contacting DTC** over a period of 10 years. **None of the 60 cases reported in this study were diagnosed at DTC**. The extremely low contribution by PHC to the services availed by CS is a **sad reflection of the efficiency of DTC with regard to programme development and supervisory functions which are the sole responsibility of DTC**. ICORCI had recommended about 10 years back that the programme development and supervisory functions of DTC may be handed over to a Deputy Chief Medical Officer of Health of the district. **There is an urgent need to reconsider this recommendation in view of the further deterioration in these two functions as well as in providing services to CS leading to an almost total failure of DTC**.

- None of the **local leaders, social workers and NGOs** had provided advice to CS. **PMPs** do not refer CS to DTC but diagnose without sputum examination. **These are the groups who require health education now. A proper plan of action for this, adopting a contextual approach, is urgently needed**.

- Voluntary efforts and community involvement in TB programme at lower levels were conspicuous by their absence. This is an area in which innovative ideas have to be encouraged from lower and middle levels who are more exposed to the realities. **A Task force could be set up to start the necessary dialogues with these levels and to encourage innovative pilot studies**.

- More importance has to be given to the type of operations research which can help to make the TB programme more efficient and effective and to evolve the programme further, all these in a contextual manner because of the diversity involved. Lack of uniformity in studies conducted so far requires that major institutions carrying out operations research in TB, ICMR and governments of India and concerned states and WHO meet and **formulate guidelines etc for more uniform conduct of research**. A change in approach and co-operative efforts are essential. About 10 years back, ICORCI had **recommended that regional institutes for TB and chest diseases may be set up to carry out research, training, monitoring and evaluation in different parts of India** and suggested an outline for research. These and the reasons which stood in the way of implementing this **recommendation could be a good starting point for meaningful discussions and for formulating a contextual plan of action**.

SUMMARY

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1. **Study of behaviour of chest symptomatics (CS) in the community is of great importance because the efficiency of both case finding and case holding of TB are linked with this**. World Health organisation wanted to have studies on this in rural and urban populations in different parts of India. The study in Karnataka was entrusted to the Institute of Communication, Operations Research and Community Involvement, Bangalore (ICORCI).

2. The study was conducted in 1997 in Mysore and Raichur districts*, the former being representative of the three districts which are comparatively the best with regard to availability of government health facilities (HFs) and the latter being representative of the three districts which are comparatively the poorest with regard to availability of government HFs. In each district, two primary health centres (PHCs) and two towns were selected at random. In each selected PHC/town, random samples of villages/wards were selected to get population of 5,000 in each PHC/town. **The total study population was about 40,000**.

3. Information was collected through group discussions in villages/town wards to study the profile of villages and towns and through interviews with adult members of each household (HH) to collect detailed information about HHs, sick persons (SPs) and CS. **All CS were directly interviwed**.

4. **Respondents**, who furnished information to Field Investigators specially trained for the purpose, **were mostly head of HHs (HOH) or his wife**. Of the respondents, 75% (rural) and 50% (urban) in Mysore and 65% in Raichur were illiterate. **About 70% of them were of age 25-54 years which has maturity and good memory.**

* Hereinafter, Mysore and Raichur are used for the two districts and not for towns by the same names.

5. Comparison of age and sex distributions of the study population with those of rural and urban populations in 1991 census in the two districts showed that the **study populations were representative of the two districts**.

6. **Illiterates were less in Raichur among both males and females**. They were more in rural areas of Mysore. Age group 0-6 years, students and housewives together formed about 55%. In rural areas, 35% in Mysore and 19% in Raichur were engaged in agriculture and allied work. Among rural females in Mysore, 37% were housewives compared to 57% in Raichur. Among urban females 50% in Mysore were housewives compared to 60% in Raichur.

7. While percentage of SC/ST HHs was slightly less in Mysore, that of BCs were more than double of that in Raichur.

8. About 55% were nuclear families. They were more in urban areas. **Households with CS (CS HHs) had more joint families**.

9. About 60% of HOH were illiterate. While illiterate HOH were more in rural Mysore (compared to urban), they formed the same proportion in rural and urban Raichur. **Percentage with education upto SSC or more (SSC+) among HOH was least in CS HHs** and highest in non-sick HHs with non-CS sick HHs in between.

10. **About 20% of HHs had only illiterates. This percentage in rural Mysore was double of that in urban Mysore**. Percentage of HHs with highest education level of SSC+ was least in CS HHs and highest in non-sick HHs with non-CS sick HHs in between in Raichur and urban areas of Mysore.

11. **Percentage of CS HHs steadily increased with family size, number of females in HH, number of persons of age 15+,** number of females of age 15+ and number of children below 5 years (the last only in Mysore).

12. **Only 3% of HHs or less were without earning members**. Those with one earning member was about 35% and with two earning members 30%. Average number of earning members was 2.5 for CS HHs, 2.2 for non-CS sick HHs and least (2.1 in Mysore and 1.9 in Raichur) in non-sick HHs. **About 60% of HHs did not have any earning female member**.

13. About 6% of HHs had atleast one CS. This proportion was double in rural Mysore compared to urban Mysore. **Non-sick HHs in Mysore (25%) were double of that in Raichur (12%).**

14. Proportion of HHs with at least one SP was 76% in Mysore and 88% in Raichur. **Average number of SPs was higher in CS HHs compared to non-CS sick HHs**. About 35% of HHs did not have a female SP and about 15% no SP of age 15+. Among CS HHs, 97% in Mysore and 99% in Raichur had only one CS. About 60% did not have a female CS. Sickness among females was less in CS HHs in rural and urban Raichur .

15. **About 25% of the population was sick at any time during last six months. Prevalence rate (PR) for all sickness was higher among females**. PR for CS was 1.4% in Mysore and 1.1% in Raichur. While there was no rural-urban difference in Raichur, this rate was 1.7% in rural Mysore and 0.8% in urban Mysore. PR was higher among males.

16. **About 40% of SPs were in cough group** (cough, upper respiratory infections and breathing problems) and 14% in diarrhoea group (diarrhoea and other digestive problems). While those in fever group (fever of all types) was less in Mysore, those in general problem group (with aches,

pains etc.) were more compared to Raichur. **PR for cough group was generally higher in older age groups, this difference being larger among rural males**. PR for fever and general problem groups were higher among females of all age groups, this difference being larger for the latter group. PR for diarrhoea group was higher in rural areas for all age groups.

17. **PR for cough (CO) and other symptoms (OS) was 5.8% and 16.6% respectively. These showed an initial decrease with age followed by a steady increase. Percentage having cough for more than three weeks increased with age.** PR for CS and OS were least in large families and showed a steady decline with increase in education level.

18. Duration of sickness in the four main groups mentioned above showed two peaks, one for symptoms for 1-7 days and the other generally for symptoms for 29 days or more (29+). The latter (most of which was 90+ days) probably indicates the start of chronic illness. This was negligible for fever group but higher for cough group.

19. **More than 90% of SPs contacted some health facility (HF), some more than once**. Those contacting only primary level HFs were 55% (urban) and 71% (rural) in Mysore and 71% (urban) and 90% (rural) in Raichur. **Those using primary and secondary HFs were more among CS. Hardly any one contacted District Tuberculosis Centre (DTC). Most popular HF was PHC in Mysore and PMP in Raichur. Most popular HF among CS was PMP. None of the CS contacted DTC**, even though one each of the two selected towns in each district had a DTC. Use of primary level HFs steadily decreased with increase in duration of symptoms. While about 37% to 47% of those not taking any action had symptoms for 1-7 days, about 40% to 50% had been sick for 29+ days.

20. **In CS HHs, 45% to 67% in rural areas and 52% to 68% in urban areas contacted PMP when someone was sick**. Average distance traveled to contact PMP did not differ between rural and urban CS in Raichur (3 to 4 km) but was about 3-times more in rural Mysore (13 km) compared to urban Mysore (4 km). Only 9% of CS HHs contacted both PMP and a health institution (HI) in Raichur compared to 21% in Mysore. Second preference for those contacting PMP was PHC in Mysore and general hospital (GH) in Raichur.

21. **Nearly 40% of CS were females. PR for CS steadily increased with age among males and females. Joint families had the highest PR and extended families least** with nuclear families in between. While PR was higher among SC/ST in Raichur, both SC/ST and BCs had the same PR in Mysore. Other Hindus had the least PR. Illiterates had the highest PR in Mysore. **In Raichur, PR increased with increase in education level**. Unemployed had the highest PR among occupation groups.

22. **CS with cough alone formed less than 20%.** Less than 20% had haemoptysis. **Cough for more than 1 year was reported by 30% to 50%.** Average duration of cough varied from 30 to 40 weeks. **Percentage of CS with chest pain decreased steadily with age in Mysore**. CS without chest pain formed 41% in Raichur compared to 34.1% (urban) and 24% (rural) in Mysore. Average duration of chest pain varied from 17 to 25 weeks and that of fever from 9 to 20 weeks. Loss of weight was not reported by 60% in Mysore and 70% to 77% in Raichur. Average duration for loss of weight varied from 9 to 14 weeks. Night sweat was reported by 23% to 40%.

23. **Overall, one action had the highest frequency (33%) followed by two actions (28%) and by three actions (17%). Average number of actions taken increased with duration of cough**. No such influence was

observed for duration of chest pain. Age of CS appears to influence both "not taking action" and number of actions taken. Percentage taking action was highest for CS living in HHs with highest level of education of SSC+. **Percentage not taking action was 18% among male CS and 10% among females CS**.

24. **First action was taken within 15 days by 72% to 78% of Mysore CS and 55% to 59% by Raichur CS**. About 15% in Mysore and 25% in Raichur took action only after 30 days. **Average interval between onset of symptom and first action was less among rural CS** (42 days in Mysore and 32 days in Raichur) **compared to that among urban CS** (94 days in Mysore and 70 days in Raichur). This gap between rural and urban CS was reduced for second action. In Mysore, 30% had taken second action within 30 days and about 50% within 60 days. In Raichur, only 15% had taken second action within 30 days and less than 40% within 90 days. Average interval for third action was about 300 days. **One third of rural CS and half of urban CS took third action after 300 days**.

25. Primary level HFs were first contacted by about 70% of urban CS. This percentage was higher among rural CS (80% in Mysore and 94% in Raichur). **The vast majority (60% to 70%) had contacted PMP for first action. Popularity of PHC among rural CS was quite low (only about 20% contacting it).** For second action, use of primary HFs was still quite high – more than 53% in Mysore and more than 66% in Raichur. **Even for third action, more than 32% in Mysore and more than 48% in Raichur contacted primary HFs. Overall, about 45% still contacted PMP. For all the three actions, primary level contacts were more among rural CS and more often with PMP than PHC**. Continued use for all three actions by a large proportion of CS shows that **primary HFs do not refer CS to specialised health facilities (SHFs).** Average number of visits

made during first action was 4.3 (rural) and 4.8 (urban) by Mysore CS and 5.4 (rural) and 5.2 (urban) by Raichur CS. Fewer visits were made for second and third actions (3.1 to 4.4) indicating quicker relief or quicker disappointments.

26. Average distance for first action by rural and urban CS was 9.9 km and 4.3 km respectively by Mysore CS and 3.5 km and 4.1 km respectively by Raichur CS. This increased to 22.7 km and 19.0 km respectively by Mysore CS and to 16.9 km and 11.6 km respectively by Raichur CS for second action. There was no appreciable increase for third action. Average distance for all actions together was 18.2 km and 10.9 km respectively for Mysore CS and 10.2 km and 8.8 km respectively for Raichur CS. **Rural CS had to travel longer distances for first action**. Percentage travelling by bus increased from first to second action. Use of bus was more than 75% by rural Mysore CS for all three actions. **About 50% of Raichur CS travelled less than 1 km compared to less than 10% of Mysore CS, for first action.**

27. Single contacts with GHFs by rural and urban CS were 32% and 40% respectively by Mysore CS and 40% and 49% respectively by Raichur CS. Multiple contacts with same (or same type of) GHF by rural and urban CS were 18% and 15% respectively in Mysore and 41% and 16% respectively in Raichur. Multiple contacts with combinations of GHFs were made by 32% and 22% respectively in Mysore and 14% and 27% respectively in Raichur. Multiple contacts with GHFs and SHFs were made by 13% and 21% by Mysore CS and 4% and 8% by Raichur CS. **A larger percentage of Raichur CS (95%) contacted only GHFs compared to Mysore CS (80%).**

28. **Sputum examination was ordered for only 23% actions taken by CS**. This percentage increased from 12% during first action to 24% for second and 36% for third action. **PHC, which was expected to order sputum examination for all CS, had done so for only 1% of contacts made by CS. Only for 64% of examinations results were told to CS**. Out of results told, 52% were positive (34% out of those examined) and **showed a high positivity rate**. The situation was similar for x-ray examination.

29. In all 60 CS stated that they have been told that they were suffering from TB. These gave a **case yield of 12% among rural CS and 23% among urban CS** (overall 16%). **Rural-urban difference in case yield was more among male CS. PMP had diagnosed 60% of these cases. None were diagnosed by DTC**. Overall, **47% were diagnosed during first action**, 37% during second action and 12% during third action. While 50% of rural cases were diagnosed during second action, 56% of urban cases were diagnosed during first action. **More than 80% were diagnosed during first or second actions. About two-thirds were diagnosed within 90 days of onset of symptoms**. About one-nineth of rural cases and one-fifth of urban cases were diagnosed within 16-30 days of onset.

30. **Averages for direct, indirect and total costs incurred by urban CS were all higher than those by rural CS**. Average of total cost was Rs.1,310 for rural CS and Rs.1,940 for urban CS. About 60% of all CS had not incurred any indirect cost. Direct cost was the major component of total cost. The **major component of direct cost was cost of medicines** with an overall average of Rs.840. Next was cost for consultation (Rs.130) followed by travel cost (Rs.120). **All these costs (except travel cost) were higher for urban CS**.

31. Influence of sex, age, family size, type of family, highest education level in HH, religion and caste and occupation on prevalence of OS, CO and CS and on number of actions taken, type of HFs contacted and cost incurred by CS were studied. Though some clear differences and trends were observed, particularly for age and highest education level in HH, no uniform patterns emerged. **A study covering large number of CS will clarify the situation**.

32. Comparability of results with those from other studies poses some problems. One basic problem is that the **vast majority of CS have symptoms due to diseases other than TB. Relief from some of these will be possible from general (non-TB) treatment and thereby reduce the number of CS**. This reduction, which will depend upon the extent and type of action taken by CS, will lead to regional variations. Besides, seasonal variations and 'epidemic spurts' could affect the number of CS. Other serious problems are lack of uniformity in definition of CS, population (agewise) used for calculation of prevalence rate, type of investigators collecting data and recall period used for symptoms.

33. **Different studies show that prevalence rate for all sickness varied from 9.5% to 38%, with the rate from the present study occupying a central position. Prevalence rate for CS varied from 1.0% to 17.7%, with the rate from the present study occupying a lower position.**

34. **Percentage not taking action varied from 3 to 50 for OS and from 14 to 52 for CS**, this being much higher in earlier studies. **Lower figures in more recent studies may be due to a steep increase in use of PMP from about 10% to 60%** in recent studies.

35. **Comparison with other studies shows that the present study has covered many more aspects and gives a more exhaustive picture of behaviour pattern of CS and of OS for comparison.**

36. **With comparatively better availability of government HFs, Mysore CS had to travel longer distances to get fewer cases diagnosed and that too after longer intervals from onset of symptoms. This could lead to a paradoxical conclusion that having better availability of government HFs is disadvantage for CS.**

37. **The present study has not only confirmed that the major burden of providing curative services is borne by PMPs but shown that this could be as high as 67%.** But PMPs do not refer CS to specialised HFs like DTC and sanatorium. **Without ordering for sputum examination, PMP do clinical diagnosis of TB**. This leads to wrong diagnosis and treatment. **For the success of the TB programme, it is essential to involve them properly and completely in the TB programme. They should be made aware that both (a) over diagnosis** which leads to unnecessary suffering and agony due to social trauma and to suppressing or delaying the right treatment required **and (b) improper anti-TB treatment** which does not lead to complete cure and can lead to development of resistance to anti-TB drugs, **are social crimes**.

38. **Though PHC is the main pillar of the TB programme, its contribution has been low**. Reported statistics show a substantial reduction in the contribution of PHC over a 10 year period. The present study has shown that **only 16% of CS contacted PHC for their first action. PHCs, which were expected to do sputum examination for all CS**, had ordered sputum examination for only 1% of contacts made with them by CS in the present study. Out of the reportedly diagnosed TB cases in this study, **only 3% were diagnosed by PHC**. Further, CS contacting PHC **had**

reported that they had incurred cost for services rendered at PHC. All these question the relevance of PHC. Either restructuring PHC to make it the pillar of TB programme or finding an alternative pillar is essential.

39. **Contribution of DTC for providing services to CS was almost nil even in urban areas eventhough two of the four towns selected for the study had DTC**. Reported statistics show that there was **40% reduction in number of CS contacting DTC** over a 10 year period. **None of the 60 reportedly diagnosed TB cases in this study were diagnosed at DTC. The extremely low contribution by PHC to the services availed of by CS is a sad reflection of the efficiency of DTC** with regard to programme development and supervisory functions which are the sole responsibility of DTC. Similar observations about the failure of DTC were made 10 years back by ICORCI[23] which recommended that the **programme development and supervisory functions of DTC may be handed over to a Deputy Chief Medical Officer of Health in the district**. There is an urgent need to **reconsider this recommendation in view of the further deterioration in these two functions as well as in providing services to CS leading to an almost total failure of DTC**.

40. Awareness and action taking by CS is now so high that any further efforts on providing health education to them will not be cost-effective. In this study, **none of the local leaders, social workers and NGOs had provided advice to the CS. PMPs do not refer CS to DTC and diagnose TB without sputum examination**. It is doubtful whether they emphasise on proper treatment of TB. **These are the groups who require health education now. A proper plan of action for this adopting a contextual approach is needed now.**

41. **Voluntary efforts and community involvement in TB programme at lower levels were conspicuous by their absence. This is an area in which innovative ideas have to be encouraged from lower and middle levels who are exposed to the realities. A task force could be set up to start the necessary dialogues with these levels and to encourage innovative pilot studies.**

42. More importance has to be given to the **type of operations research which can help to make TB programme more efficient and effective and to evolve the programme further** (a beginning for which has been attempted under RNTCP), **all these in a contextual manner because of the diversity involved**. Lack of uniformity in studies conducted so far **requires that major institutions carrying out research, ICMR and governments of India and concerned states and WHO meet and formulate guidelines etc, for more uniform conduct of research**. For moving towards finding and implementing solutions which can take care of both regional and national needs **a change in approach and co-operative efforts are essential**. About 10 years back, ICORCI[23] had **recommended that regional institutes for TB and chest diseases may be set up to carryout research, training, monitoring and evaluation in different parts of India and suggested an outline for such research. These and the reasons which stood in the way of implementing this recommendation could be a good starting point for meaningful discussions and for formulating a contextual plan of action.**

Chapter 1
INTRODUCTION

BEHAVIOUR PATTERN OF CHEST SYMPTOMATICS IN RURAL AND URBAN POPULATIONS IN KARNATAKA

CHAPTER 1

INTRODUCTION AND GENERAL FEATURES

1.1 Introduction

Tuberculosis control programmes had three main aspects viz., mass BCG vaccination, diagnosis of TB patients and their treatment with anti-TB drugs. The main emphasis of programme oriented research on tuberculosis was on methods of case finding and drug regimen used. The importance of the former became diluted following a sociological study of the awareness of symptoms of pulmonary tuberculosis[1]. This study showed that 52 per cent of the bacteriologically positive TB cases diagnosed in a survey had visited health institutions for seeking relief of their symptoms. Following this, the National Tuberculosis Programme (NTP) which was formulated in 1962 laid emphasis on diagnosing and treating those TB cases who were already seeking relief from health institutions.

1.1.2 Reviews of the functioning of NTP showed that the expectations regarding case finding[2] based on action taking by TB cases were far from being fulfilled. This could be due to two possible reasons viz., (1) the inefficiency of the functioning NTP to diagnose even the majority of the TB cases seeking relief from health institutions and (2) the behaviour of the TB cases becoming different, with more of them going to private medical practitioners (who are not functioning as part of NTP) whose number and popularity are likely to be increasing in urban and semi-urban areas at least. Unfortunately, studies on action taking by TB cases, which is the basis of case finding in NTP, has not received enough attention after the study mentioned earlier which showed the pattern of behaviour based only on a small number of cases in an area near Bangalore at the time of the study (about 37 years back). Apart from two repetitions of this study[3,4] in villages around Bangalore, both towards the end of the seventies, hardly any attempts have been made to study the behaviour of TB cases in the community in other regions of the country and at regular intervals of five or ten years so that

variations, if any, between different regions and over time could be ascertained. One serious difficulty in carrying out such studies is that the TB cases in the community have to be identified first through a costly tuberculosis survey. A cheaper alternative is to study the pattern of behaviour (particularly for seeking relief) by persons with symptoms suggestive of pulmonary tuberculosis (chest symptomatics) in the community which will throw some light on the behaviour of TB cases who are a part of this group. Moreover, information on the behaviour pattern of chest symptomatics will help to improve case finding. Methods can be devised to increase the proportion of symptomatics, and thereby of TB cases, visiting health institutions from the observed 52 per cent to as close to 100 per cent as possible. Emphasis can also be given to the steps needed to motivate chest symptomatics to take action earlier than at present. This will result in diagnosis of TB cases at an earlier state of the disease.

1.1.3 In the mid seventies, some of these aspects were studied (to a limited extent) in a rural community[5]. But, information about regional as well as rural-urban variations in the behaviour pattern of chest symptomatics is far from complete. Yet, these aspects continued to get very little attention.

1.1.4 Reviews of NTP have also shown that the diagnosed TB cases are often not regular in taking treatment. This was the main reason for adoption of short course chemotherapy and supervised administration of drugs. But, if larger proportion of TB cases are seeking treatment from private medical practitioners (which is a possibility mentioned in paragraph 2 above), the programme has to take steps to ensure regularity of treatment of these cases. The behaviour pattern of TB cases in the community with regard to treatment ought to be studied to understand the reasons for their behaviour so that corrective measures could be evolved. These studies are also difficult because the TB cases in the community have to be first identified by TB prevalance surveys. The cheaper alternative of studies on the behaviour pattern of chest symptomatics in the community (who include the TB cases) with regard to case holding may throw some light. This aspect also has not received the attention it deserves.

1.1.5 Evidently, the behaviour pattern of chest symptomatics in the community is of great importance because the efficiency of both case finding and treatment under the programme is linked with this. In view of this, the World Health Organisation wanted to have studies on the behaviour pattern of chest symptomatics in rural and urban populations in different parts of the country. The study in Karnataka state was entrusted to the Institute of Communication, Operations Research and Community Involvement, Bangalore (ICORCI).

1.2 **Objectives of the Study**

1.2.1 The general objective is to collect detailed information on the behaviour pattern of chest symptomatics (as defined in the RNTCP Manual) in rural and urban populations and to ascertain, if possible, how this pattern is influenced by the level of provider services.

1.2.2 The specific objectives are to study the following in rural and urban populations :-

a) Which providers do the Chest symptomatics seek, how early, how often and at what intervals (in case of multiple contacts) ?

b) What are the costs and benefits of the services as perceived by the chest symptomatics?

c) What investigations are undertaken by the chest symptomatics and whether these tend to be duplicated ?

d) What are the direct and indirect costs incurred by the chest sympomatics for diagnosis and treatment ?

e) In case of availing multiple provider services for diagnosis and treatment, the reasons for the same.

f) To what extent age, sex, type of occupation and type of family influence the pattern of behaviour.

g) The opinion of chest symptomatics about different types of provider services and their suggestions for improvement.

1.3 Design and Study Population

1.3.1 Karnataka state had 20 districts at the time of planning the study. Excluding Bangalore Urban District, the other 19 districts were ranked independently for each of the following characteristics :-

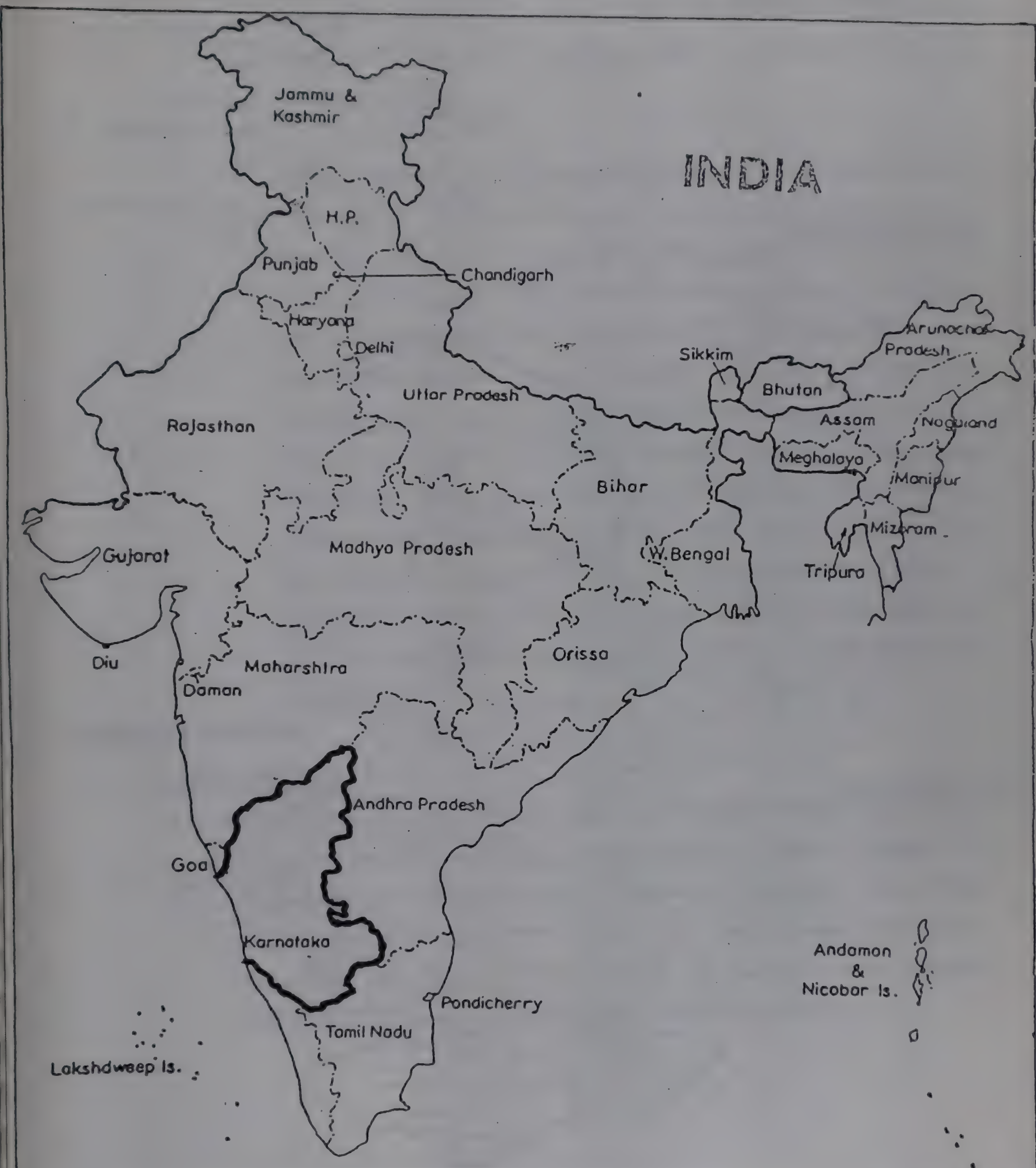
1. Number of hospital beds per 1,000 population
2. Number of TB sanatorium beds per 1,000 population
3. Number of TB clinics per 1,000 population
4. Number of general clinics per 1,000 population
5. Percentage of couples protected by sterilisation (as an index of programme performance under the government health services system)

For items (1) to (4), the position as on 31 March 1995 was used. For item (5), the data for 1993-94 was made use of.

1.3.2 The total of these five independent ranks for each district was considered as an indicator of the quality of the provider system in that district. The districts with the three lowest rank totals were Kodagu (24), Mysore (29) and Mandya (31). From these three districts, Mysore was selected at random for the study as a district with a comparatively good provider system. The three districts with the highest rank total were Raichur (86), Belgaum (77) and Gulbarga (74). Of these three districts, Raichur was selected at random as a district with a comparatively poor provider system.

1.3.3 Within each selected district, the rural and urban populations were selected as follows :-

(a) ***Rural Sample***: Out of the total number of Primary Health Centres (PHCs) in each selected district, two PHCs were selected using Probability Proportional to Size (PPS) method of sampling, size being population covered by PHC. In each selected PHC, the villages were arranged in random order. Villages in this list were taken up one after the other and covered completely till a total



INDIA
Jammu & Kashmir
H.P.
Punjab
Chandigarh
Haryana
Delhi
Uttar Pradesh
Rajasthan
Sikkim
Arunachal Pradesh
Bhutan
Assam
Nagaland
Meghalaya
Manipur
Bihar
Mizoram
Gujarat
Madhya Pradesh
W. Bengal
Tripura
Diu
Maharshtra
Orissa
Daman
Andhra Pradesh
Goa
Karnataka
Andaman & Nicobar Is.
Pondicherry
Tamil Nadu
Lakshdweep Is.

KARNATAKA STATE
24 12 0 24 48 72 MILES
20 0 20 40 60 80 100 KILOMETRES
STATE BOUNDARY
DISTRICT ,,
TALUK ,,
STATE CAPITAL
DISTRICT HEADQUARTERS
TALUK ,,
T. Narsalpur — Thirumakudlu Narsalpur
Ho — Hospet
H — Hubli
MAHARASHTRA
ANDHRA PRADESH
ARABIAN SEA
GOA, DAMAN & DIU
KERALA
TAMIL NADU
BIDAR
GULBARGA
BIJAPUR
RAICHUR
BELGAUM
DHARWAR
BELLARY
NORTH KANARA
KARWAR
CHITRADURGA
SHIMOGA
CHIKMAGALUR
TUMKUR
KOLAR
BANGALORE
HASSAN
SOUTH KANARA
MANGALORE
MANDYA
MERCARA
COORG
MYSORE

population of close to but less than 5,000 was covered. In the next village, a sample of households (HHs) was covered to get a total sample of about 5,000 persons. The rural population covered was about 5,000 per PHC, 10,000 per district and 20,000 for the two districts together.

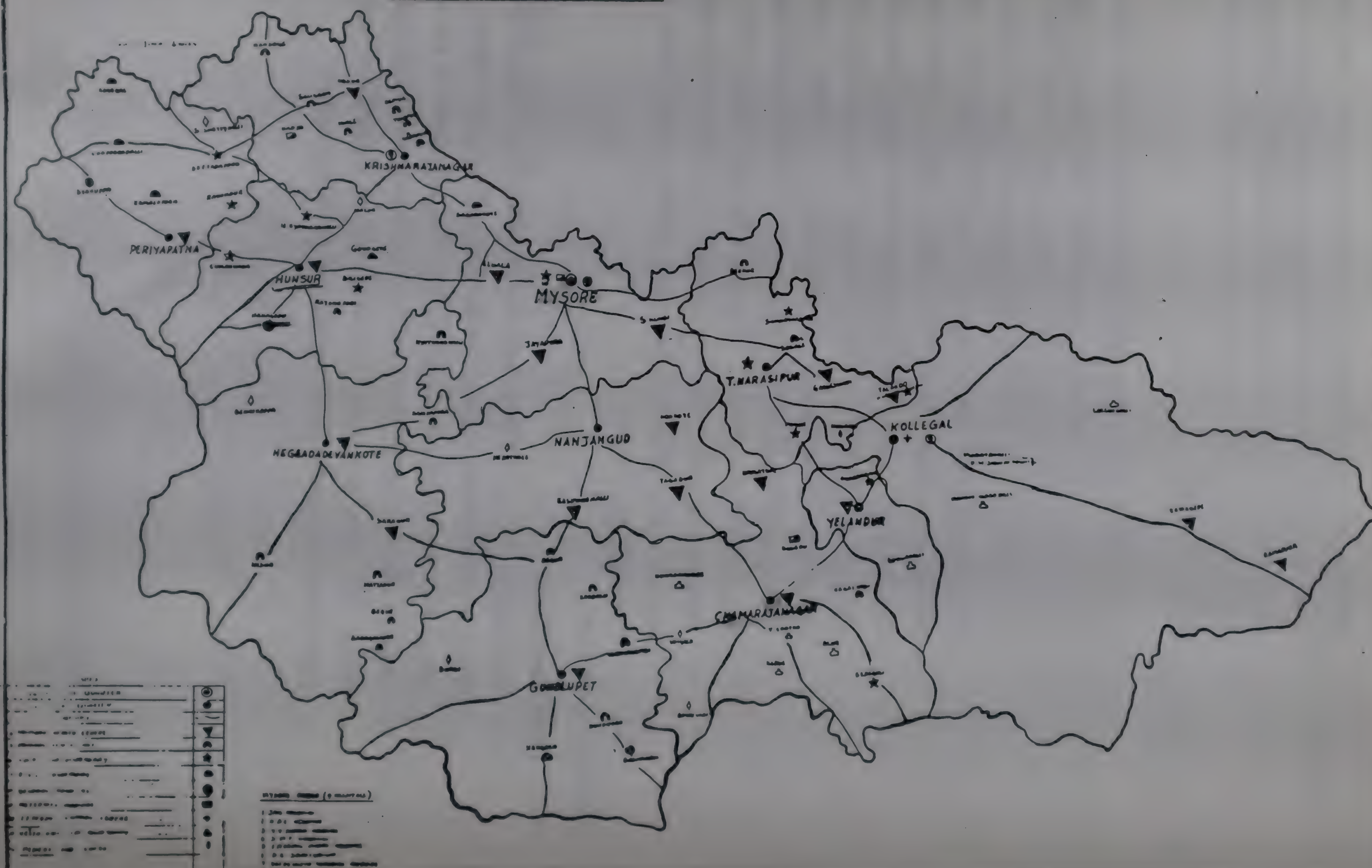
(b) ***Urban Sample**:* Out of the total number of Urban Agglomerations (UAs) as per 1991 Census in each selected district, two UAs were selected using PPS method of sampling. In each selected UA, all the municipal wards of the town/city and the Out Growths (OGs) of the town/city were listed. From this list, five wards/OGs were selected at random. In each selected ward/OG, a central place was identified. The four Field Investigators (FIs) moved away from this central place in different directions and enumerated the households (HHs) on his left and going into smaller streets / bylanes also. When there was a dead end, the FI returned, taking the houses on his left. They stopped enumeration when a population of about 1,000 was covered. Thus an urban population of 5,000 was covered in each UA, 10,000 in each district and 20,000 in all.

1.4 Rural Study Area

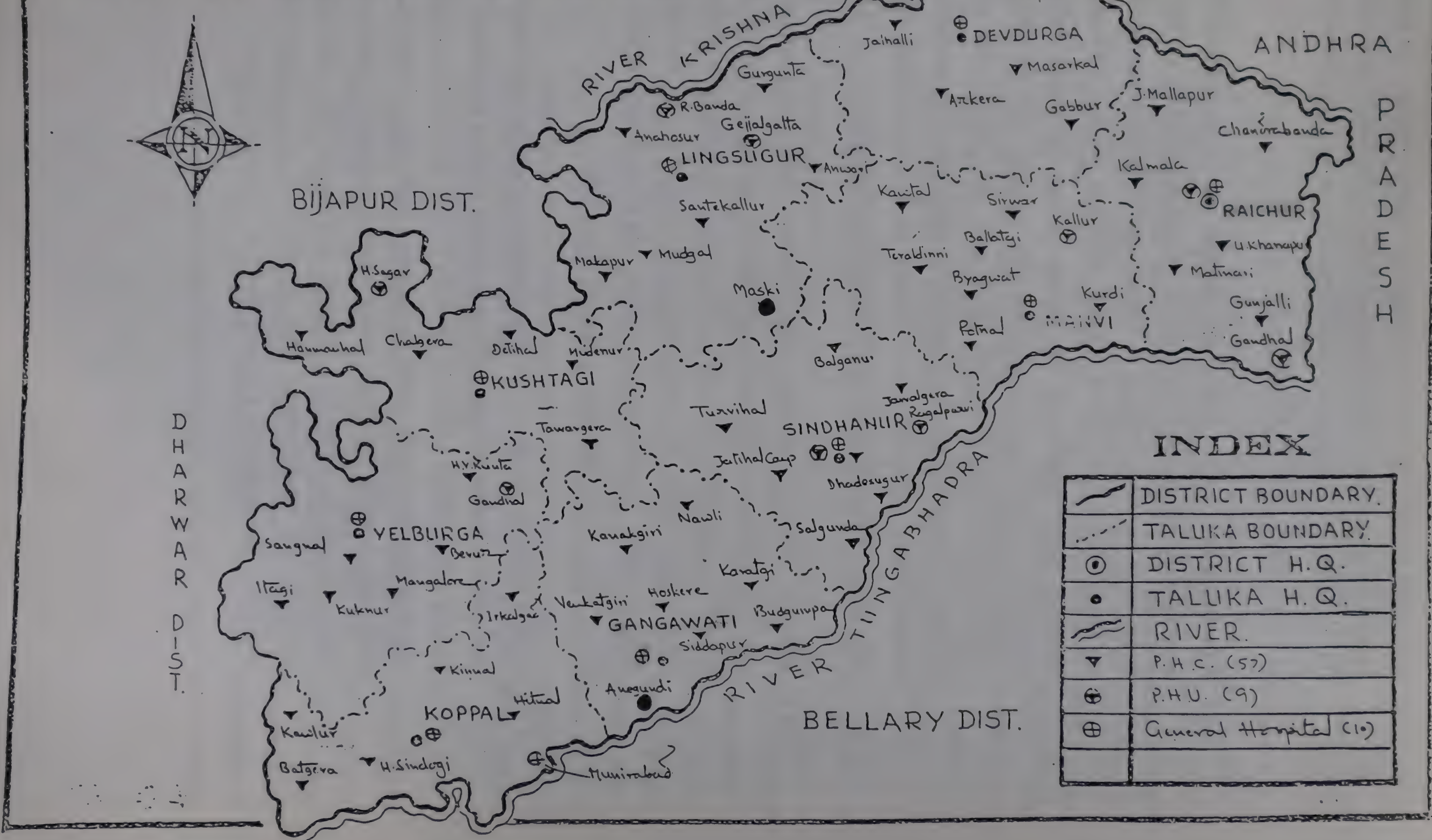
1.4.1 ***Population***: The rural sample included 13 villages from Mysore district and seven villages from Raichur district. Among the Mysore villages, one village had a population of about 3,000. The population of the other villages varied from about 150 to 1,500. The Raichur sample included one Village with more than 4,000 population, two with population between 2,000 and 3,000 and the remaining with 150 to 400 population.

MYSORE DISTRICT

SHOWING HEALTH AND MEDICAL INSTITUTIONS



MAP OF RAICHUR DISTRICT.



1.4.2 ***Approach Road***: Out of the 13 villages in Mysore district, the approach road to the village was tarred in one, metalled in six and of mud in six. In Raichur district, the approach roads were tarred in four villages and made of mud in the other three villages.

1.4.3 ***Panchayat Members***: In both the districts, one of the sample villages was the PHC village itself. One of the 13 villages in Mysore district and three out of the seven villages in Raichur district had the headquarters of the Village Panchayat. On the average, in Mysore villages, 1.8 Panchayat Members were residing in the sample village. Of these Panchayat Members, (a) 60% were males and 40% females and (b) 30% were SC/ST, 57% Backward Classes (BCs) and 13% others. The average number of Panchayat Members residing in the sample villages was higher among Raichur villages (3.75). Of these, (a) 60% were males and 40% females (b) 47% were SC/ST, 20% BCs and 33% others.

1.4.4 ***Schools:*** Among the Mysore villages, two out of the 13 did not have any school. One had a pre-primary school and 10 had primary school, four of them having middle school also. Educational institutions of higher level did not exist. There was no school in two out of the seven villages in Raichur district. Five had primary school, with three of them having middle school also. Two villages had pre-university colleges.

1.4.5 ***Health Facility***: Of the 13 Mysore villages, 11 did not have any health facility (i.e. a health institution (HI) or a private medical practitioner (PMP) located in the village. One had a Primary Health Centre (PHC). The other had a government clinic / dispensary and a PMP of ayurveda, the latter being quite popular. Out of the seven Raichur villages, four had no health facility. Out of the other three villages one had a PHC and a PMP of allopathy. The other villages were served by 1 or 2 popular PMPs of allopathy. One village had a popular PMP of homeopathy also.

1.4.6 ***Outside Health Facility – Mysore District:*** Sick persons (SPs) from nine of the 11 villages in Mysore district without any health facility visited PMPs and HIs outside the village. For visiting PMPs, SPs from three villages walked about 1.5 to 5 km and from six villages they travelled about 4 to 8 km by bus paying Rs.2 to 4 per trip. For visiting HIs, SPs from six villages walked 1.5 to 7 km and from three villages travelled 4 to 20 km by bus paying Rs.2 to 8 per trip. From two out of the 11 villages without a health facility, SPs visited only health institutions, travelling about 3 to 20 km by bus paying Rs.1.5 to 8 per trip. Thus, SPs from all the 11 villages visited HIs; 10 out of 11 visiting PHC, and the remaining village visiting government hospital (GH) only. GH was an additional place of visit for SPs from six more villages, making a total of seven villages using GH. Diagnostic facilities were lacking in all the health facilities except GH.

1.4.7 ***Outside Health Facility – Raichur District***: Out of the four villages of Raichur without a health facility, two were visited at intervals (regularly for one) by a PMP. From one of these villages, SPs visited PHC only and from the other PHC and two PMPs. SPs from the other two villages without a health facility visited PHC and three PMPs. SPs from all the four villages without a health facility travelled about 6 to 12 km by bus paying Rs.3 to 6 per trip to a health facility. None of the health facilities visited had any diagnostic facilities except for some laboratory services at PHC. While SPs from both villages with health facility in Mysore district visited outside health facilities also, this was not the case in the three villages with health facility in Raichur district.

1.4.8 ***Voluntary Organisations and Community Participation***: Youth Clubs existed in four out of the 13 Mysore villages and one out of the seven Raichur villages. But none of them had participated in any health activities. Mahila Mandals functioned in three out of the 13 villages in Mysore district and one out of the seven Raichur villages. They hardly participated in health activities except for some health education activity in two Mysore

villages. Village Health Committees did not exist in any of the villages. Community participation in health activities was almost non – existent.

1.4.9 ***Interview Participants***: Information on the village profile was collected from group discussions in each village. On the average, 8.7 persons participated in the discussions in Mysore villages. Of them, (a) 88% were males and 12% females, (b) 19% were SC/ST, 59% BCs and 22% others. About 13% of the participants were Panchayat Members. In Raichur villages, on the average 8.5 persons participated in the discussion in a village. Of them, (a) 65% were males and 35% females, (b) 53% were SC/ST, 12% BCs and 35% others and (c) about 44% of the participants were Panchayat Members.

1.5 Urban Study Area

1.5.1 ***Municipal Wards***: The urban samples were selected at random from the municipal wards of the selected town and its OGs. The resulting sample consisted of only municipal wards in all the four towns. Each selected ward had one Municipal Councillor residing there. In Mysore towns, their break-up was : (a) 75% males and 25% females and (b) 12% SC/ST, 50% BCs and 38% others. The corresponding figures for Raichur towns were : (a) 40% males and 60% females and (b) 50% SC/ST, 25% BCs and 25% others.

1.5.2 ***Interview Participants***: Information on the profile for wards was collected through group discussions in each ward in the presence of the Municipal Councilor of the ward. On the average, 2.1 persons participated in the discussions in a ward in Mysore district. Of the participants, (a) 88% were males and 12% females and (b) 53% were SC/ST, 20% BCs and 27% others. About 47% of the participants were Municipal Councilors. In Raichur towns, on the average 6.3 persons participated in the discussions,

which was thrice the number compared to Mysore towns. Of them, (a) 92% were males and 8% females and (b) 26% were SC/ST, 48% BCs and 26% others. About 21% of the participants were Municipal Councillors.

1.5.3 ***Private Medical Practitioners***: All the five wards of Mysore city had PMPs practicing in the ward. The number of PMPs in these wards varied from 8 to 15. The services of two ayurvedic physicians and one homeopathic physician were availed of by the SPs of these wards. Only one of the five wards in Chamaraja Nagar (Mysore District) had a PMP of allopathy within its limits. None of the 10 wards in Raichur district had a PMP within its limits.

1.5.4 ***Health Institutions*** : Three of the five wards of Mysore city had health institutions, with one ward having four non – government hospitals and one government hospital. The other two wards had one health institution each. None of the five wards in Chamaraja Nagar and the 10 wards in Raichur district had a health institution within its limits.

1.5.5 ***Outside Health Facility***: Eventhough all the five wards in Mysore city had a number of health facilities, the SPs from these wards have visited some hospitals (two government and four non-government), a PHC (mainly for free treatment) and a PMP (mainly by rich persons) outside their ward. SPs from four out of the five Chamaraja Nagar wards without health facility visited the government hospital and PMPs outside the ward. Two of these PMPs were visited by SPs from the other ward which had a PMP. Of the 10 wards in Raichur district (all without health facility), SPs from one ward (in Raichur town) visited only two PMPs. Those from the other four wards of Raichur town visited a government hospital only. In the five wards of Gangawati town, the SPs visited the government hospital and PMPs. In two of these wards, they visited private hospitals also.

1.5.6 ***Voluntary Organisations and Community Participation:*** Voluntary organisations existed only in four out of the five wards in Mysore city and one ward in Chamaraja Nagar. All of them had carried out health camps. None of the 10 wards in Raichur district had any voluntary organisation within its limits. Community participation in health activities was non-existent in all the 20 wards included in the study.

1.6 Duration of Work

1.6.1 The project agreement was signed on 4 June 1997 and the first installment of funds was received on 24 June 1997. Designing and printing of the required forms was completed by 14 August 1997. The field staff were trained from 11 August to 24 August 1997. The field work (data collection) was carried out continuously from 25 August to 31 October 1997 in Mysore district and from 14 November 1997 to 7 January 1998 in Raichur district. Preparation of code list was taken up while the field work was in progress. Following this, data processing (consisting of scrutiny of data, coding, checking and data entry into Computer) was taken up. The analysis of the data was completed by June 1998 and the final report was completed by 4 November 1998.

Chapter 2

MYSORE DISTRICT

CHAPTER – 2

MYSORE DISTRICT

2.1 Profile of Respondents

2.1.1 ***Relationship to Head of Household***: In the study sample, 40.6% of the total 3,935 respondents for interview were the wives of the head of household (HOH), 35.7% the HOH himself, 9.8% son, 5.1% daughter, 5.0% daughter-in-law and 3.8% others. In the rural sample, 39.1% of the respondents were the HOH and 37.5% the wife. The corresponding figures in the urban sample were 32.5% and 43.5% respectively.

2.1.2 ***Age and Sex of Respondent***: Of the 3,935 respondents, 62% were females (58% in rural and 66% in urban samples). Information on age was available for 3909 (99.3%). Of them, 99.7% were of age 15 or more and 86.6% of age 25 or more. Respondents of age 25-54 (which has maturity and good memory) formed 71.9%. There were no differences between rural and urban areas. The average age of the respondents was 40 years (38.7 for females and 42.1 for males). This difference was observed in both rural and urban areas.

2.1.3 **Education *Status of Respondents***: Information on education status was available for 99.4% of the respondents – (99.8% rural and 99.0% urban). Out of them, 66.8% were illiterate (75.6% rural and 46.4% urban). While 14.9% studied upto Standard IX or less (below SSC) 7.3% studied upto the final year of school or had higher education (SSC+). The percentage of respondents with SSC+ was 5.9% in the rural sample compared to 27.1% in the urban sample. This percentage was more than double for male respondents (19.7%) as compared to females (7.5%)

2.2 Population Profile

2.2.1 ***Representativeness of Sample***: Mysore district had a population of about 31,65,000 according to the 1991 census. Of this, 22,25,000 was rural and 9,40,000 urban. The study population was 20,646 of which

10,151 was from rural areas and 10,495 from urban areas. The age-sex distributions of the census and study populations are given in Table 1. **The percentage of population in different age-sex groups does not differ much between the census and study populations in both rural and urban areas**. The maximum differences were observed for the 0-4 age group. The consistently lower figures in this age group for the study population (1997) as compared to the census (1991) could be due to a decline in birth rate during the six year period. The percentage of males in the study population is almost the same as that in the census population in both rural and urban areas. The relevant figures are: 50.3% (study) and 51.1% (census) in rural areas and 51.5% (study) and 51.0% (census) in urban areas. Thus, the study sample represents the population of Mysore district in the above respects.

2.2.2 ***Education Status***: Education status was available for 99.9% of the study population. Those below 7 years of age formed 11.1%. Among the others, 50.2% were illiterate; (40.8% among males and 59.0% among females). Illiterates were also more in rural areas (57.7%) than in urban areas (32.8%). Illiteracy was highest among rural females and lowest among urban males, the respective percentages being 67.0 and 25.6. Those who had studied below SSC formed 27.0% (25.8% rural and 28.2% urban). SSC+ was attained by 13.2% (7.7% rural and 25.9% urban). This level of education was achieved by only 8.1% females compared to 18.1% males. This proportion was least among rural females (3.1%) and highest among urban males (31.9%).

2.2.3 ***Occupation***: Information on occupation was collected from 99.7% of the study population. The age group of 0-5 years (10.5%), students and school drop outs in the age group of 6-14 years (23.3%) and housewives (19.7%) together formed 53.5% - 52.2% in rural areas and 56.6% in urban areas. In rural areas, persons engaged in agriculture and allied work (34.6%) and housewife-cum-workers (4.5%) formed the bulk of those

Table 1

Distribution of census and study populations by sex and age in rural and urban areas (Mysore District).

Age	Males				Females			
	Census (1991)		Study (1997)		Census (1991)		Study (1997)	
	No. (000s)	%	No.	%	No. (000s)	%	No.	%
1	2	3	4	5	6	7	8	9
Rural								
0 – 4	122	*10.8*	336	*6.7*	119	*11.0*	389	*7.8*
5 – 14	271	*24.0*	1,196	*23.9*	270	*24.9*	1,091	*22.0*
15 – 24	218	*19.3*	1,039	*20.7*	209	*19.3*	990	*22.0*
25 – 34	159	*14.1*	742	*14.8*	171	*15.8*	865	*17.4*
35 – 44	139	*12.3*	688	*13.7*	123	*11.4*	665	*13.4*
45 – 54	106	*9.4*	499	*10.0*	87	*8.0*	451	*9.1*
55 – 64	64	*5.7*	280	*5.6*	55	*5.1*	256	*5.2*
65+	52	*4.6*	229	*4.6*	50	*4.6*	263	*5.3*
Ns	6	*0.5*	98	*1.9*	5	*0.5*	74	*1.5*
Total	**1,137**		**5,107**		**1,088**		**5,044**	
Urban								
0 – 4	45	*9.4*	385	*7.3*	44	*9.7*	347	*6.9*
5 – 14	108	*22.5*	1,158	*21.9*	104	*23.0*	1,065	*21.0*
15 – 24	101	*21.0*	1,106	*21.0*	99	*21.9*	1,107	*21.9*
25 – 34	80	*16.7*	927	*17.6*	79	*17.5*	962	*19.0*
35 – 44	63	*13,1*	770	*14.6*	52	*11.5*	662	*13.1*
45 – 54	41	*8.5*	449	*8.5*	34	*7.5*	436	*8.6*
55 – 64	24	*5.0*	287	*5.4*	22	*4.9*	258	*5.1*
65+	19	*4.0*	197	*3.7*	19	*4.2*	225	*4.4*
NS	4	*0.8*	78	*1.5*	4	*0.9*	76	*1.5*
Total	**484**		**5,357**		**456**		**5,138**	

NS – Not stated

Note : Percentages in different age groups are calculated out of the number of persons for whom age has been stated.

engaged in productive activities. The pattern in urban areas was different with those engaged in business and allied household industry being most frequent (11.9%) followed by skilled labour (9.6%), unskilled labour (6.3%) and agriculture and allied work (5.2%). Among rural females, 37.1% were housewives only, 14.6% doing agriculture and allied work, 8.9% housewife-cum-workers and 4.9% unemployed. In urban areas, 45.9% of females were housewives, 5.4% engaged in business or allied household industry, 5.2% unemployed and 4.5% doing agriculture and allied work.

2.3 Household Profile

2.3.1 ***Religion and Caste***: Information on religion and caste was obtained from 3,934 out of 3,935 HHs. The majority of HHs belonged to BCs (57.8%) followed by SC/ST (25.4%) and other Hindus (14.0%). SC/ST, BCs and other Hindus together formed 97.2% of the HHs (99.7% rural and 91.2% urban). The lesser percentage in urban areas was mainly due to the presence of 6.2% Muslim HHs as against 0.3% in rural areas. Both SC/ST (26.8%) and BCs (59.1%) were more in rural areas. The corresponding figures for urban areas were 22.2% and 54.7% respectively.

2.3.2 ***Type of Family***: All the HHs could be classified into three types of families. Majority were nuclear families (husband, wife and children) (57.0%), this proportion being higher in urban areas (62.7%) compared to rural areas (54.6%). Joint families (which also included parents, brothers, sisters and children's family) were more in rural areas (41.7%) compared to urban areas (29.8%). Extended families (with addition of the families of brothers, sisters, uncles etc) formed only 4.8% of the total HHs (3.7% rural and 7.4% urban). **HHs with chest symptomatics (CS HHs) had more joint families (55.8%) compared to HHs without a chest symptomatic (28.1%). This was observed in both rural and urban areas**. The respective figures were : 59.1% and 40.1% rural and 48.2% and 29.1% urban.

2.3.3 ***Education Status of HOH***: Information on the education status of the head of the HH (HOH) could be ascertained from the data for 99.8% of the HHs (100% rural and 99.7% urban). Out of them, 67.0% were illiterate (75.0% rural and 48.4% urban). While 14.3% studied below SSC 11.8% studied upto final year of school or had higher education. **The percentage of HOH who had studied upto final year of school or higher (SSC+)** was 3.7 in rural areas as compared to 26.6 in urban areas. This percentage for rural and urban areas **steadily increased from 8.7 in CS HHs to 11.3 in non-CS sick HHs and 13.6 in non-sick HHs**. The education status of the HOH seems to have a positive effect on health of the HH. This seems to influence the type of sickness also, if CS HHs could be considered to be more unhealthy than non-CS sick HHs.

2.3.4 ***Highest Education Level in HH***: The highest education level attained by members of the HH was ascertained from the data for all the HHs. There were only illiterates in 18.3% of the HHs, this percentage being higher (22.2%) in rural areas compared to urban areas (9.1%). The percentage of HHs which had persons who studied below SSC, final year of school and beyond final year was 35.9, 20.4 and 19.6 respectively. HHs which had persons who studied upto final year of school formed only 13.8% in rural areas but was nearly double in urban areas (26.6%). Those with higher education did not differ so much, the percentages being 23.0 in rural and 29.5 in urban areas. While HHs with persons of SSC+ was the same in non-CS sick HHs (40.8%) and non-sick HHs (39.5%), it was less in CS HHs (34.0%). **Percentage with highest level of SSC+ steadily increased from 49.4% in CS HHs to 55.8% in non-CS sick HHs and to 57.7% in non-sick HHs in urban areas indicating a possible positive effect of the highest education level of the HH on the health of the HH. But, in rural areas, surprisingly, this percentage showed the opposite trend** viz., a steady decrease from 43.9% in CS HHs to 40.4% in non-CS sick HHs and to 22.5% in non-sick HHs and that too with wider differences than in urban areas.

2.3.5 ***Family Size*** : The distribution of all HHs and CS HHs according to family size in rural and urban areas is given in Table 2. **Percentage of CS HHs out of all HHs increased steadily with the size of the family (except for large families of 10 or more) in both rural and urban areas**. The percentage of non-sick HHs showed the opposite pattern of decrease for families of all sizes. There was no such pattern for non-CS sick HHs. The mean size of family was highest for CS HHs (6.1) followed by non-CS sick HHs (5.3) and non-sick HHs (4.9), the mean values being the same in both rural and urban areas.

2.3.6 ***Number of Females in HH*** : Similarly, the percentage of CS HHs out of all HHs increased steadily with the number of females in the HH in rural areas. The relevant figures are : 5.4% for 0-1 female, 8.5% for 2-3 females, 11.7% for 4-5 females and 13.2% for 6 or more females. There was a similar pattern in urban areas except for those with 6 or more females, the respective percentages being 2.4, 4.0, 7.8 and 3.8.

2.3.7 ***Number of Persons of Age 15 or more in HH*** : Similar trends were observed for proportion of CS HHs out of all HHs with increase in the number of persons of age 15 years or more (15+). The relevant figures are : 4.2% for HHs with 1-2 persons of age 15+, 9.6% for those with 3-4 such persons, 11.5% for HHs with 5-6 persons and 14.2% for HHs with 7 or more such persons, in rural areas and 2.4%, 3.6%, 8.0% and 5.6% respectively in urban areas. The number of persons of age 15+ in the HH seems to have the opposite influence with the percentage of non-sick HHs out of all HHs decreasing steadily. The relevant figures are : 24.9% for HHs with 1-2 persons of age 15+, 22.4% with 3-4 persons, 17.8% with 5-6 persons and 14.2% with 7 or more persons, in rural areas and 32.3%, 27.4%, 27.6% and 24.2% respectively in urban areas.

Table 2

Distribution of different types of HHs according to family size in rural and urban areas (Mysore district)

Type of HHs	No. of persons in the HH				Total
	1 – 3	4 – 6	7 – 9	10+	
(1)	(2)	(3)	(4)	(5)	(6)
Rural					
1. No. of HHs	336	1,191	267	120	1,914
2. CS HHs					
a) No.	15	89	45	15	164
b) *Percentage*	*4.5*	*7.5*	*16.9*	*12.5*	*8.6*
3. Non – CS sick HHs					
a). No.	216	858	173	86	1,333
b). *Percentage*	*64.3*	*72.0*	*64.8*	*71.7*	*69.6*
4. Non – sick HHS					
a). No.	105	244	49	19	417
b). *Percentage*	*31.2*	*20.5*	*18.4*	*15.8*	*21.8*
Urban					
1. No. of HHs	436	1,188	260	137	2,021
2. CS HHs					
a). No.	12	42	20	9	83
b). *Percentage*	*2.8*	*3.5*	*7.7*	*6.6*	*4.1*
3. Non – CS sick HHs					
a). No.	256	833	166	100	1,355
b). *Percentage*	*58.7*	*70.1*	*63.8*	*73.0*	*67.0*
4. Non – sick HHs					
a). No.	168	313	74	28	583
b). *Percentage*	*38.5*	*26.3*	*28.5*	*20.4*	*28.8*

2.3.8 ***Number of Females of Age 15 or more*** : The pattern was similar for the percentages of CS HHs and non-sick HHs out of all HHs with increase in the number of females of age 15+ in the HH in both rural and urban areas. The relevant figures are : (a) for CS HHs, 4.4% for HHs with 0-1 females of age 15+, 8.8% for those with 2 females, 11.1% with 3 females and 9.8% with 4 or more females, and (b) for non-sick HHs 25.7%, 23.7%, 19.9% and 19.6% respectively.

2.3.9 ***Number of Children below six years*** : The percentage of CS HHs out of all HHs increased with increase in number of children of age below 6 years and showed a similar pattern. The relevant figures are : 6.2% for HHs with no such children, 8.5% with one child, 8.4% with 2 children and 13.4% with 3 or more children. There was no difference between rural and urban areas. Such trends were not observed for the proportion of HHs of any type out of all HHs with increase in the number of persons in the dependent age group in the HH.

2.3.10 ***Occupation*** : As expected, the main type of work of the HH was agricultural work (including dairy and sericulture also) in the rural areas with 89.6% being so engaged. Next came coolie (labourer) with 4.4% and business (2.7%). In the urban areas, the main type of work of the HH which was most frequent was business (33.9%) followed by coolie (23.9%), office work (14.4%), agricultural work (14.0%) and work in industry (4.5%). The difference between the three types of HHs were small.

2.3.11 ***Earning Members*** : Only 1.6% of the HHs did not have any earning member (1.0% rural and 3.0% urban). HHs with one earning member formed 37.0% followed by 2 earning members (28.9%) and 3 earning members (16.8%). The average number of earning members per HH was less in the urban areas (1.9) compared to rural areas (2.4). This was due to the single earning member HHs being more in urban areas (44.9%) as

against 28.6% in rural areas and with 3 earning members being less (13.8%) compared to 20.0% in rural areas. **Average number of earning members per HH was 2.5 for CS HHs, 2.2 for non-CS sick HHs and 2.1 for non-sick HHs**. The corresponding figures were: 2.6, 2.4 and 2.5 respectively in rural areas and 2.3, 2.0 and 1.9 in urban areas. The overall mean was 2.2 (2.4 rural and 1.9 urban)

2.3.12 ***Earning Female Members :*** Households without earning female members were more in urban areas (72.0%) compared to 51.3% in rural areas, the overall proportion being 57.5%. Next in frequency were HHs with one earning female member (28.6%) followed by 2 earning female members (9.9%). The average number of female earning members per HH was 0.6 (0.7 rural and 0.4 urban). This average in rural areas was 0.6 in CS HHs, 0.7 in non – CS sick HHs and 0.9 in non-sick HHs. The respective figures in urban areas were 0.5, 0.4 and 0.4.

2.4 Sickness in Household

2.4.1 ***Sick Persons*** : There was atleast one chest symptomatic (CS) in 6.3% of HHs. While 68.5% of HHs had sick persons (SPs) without chest symptoms, 25.3% had no SP. **A significant finding is that the percentage of HHs with CS was double in rural areas (8.6%) compared to urban areas (4.1%).** Non-sick HHs (i.e., without a SP) were 21.6% in the rural sample as against 28.7% in the urban sample.

2.4.2 ***SPs in different types of HH*** : The proportion of HHs with at least one SP was 76.1%. Out of these, 62.4% had only one SP in the HH, 27.9% two SPs and 7.5% three SPs which together accounted for 97.8% of the total. There was hardly any difference between rural and urban areas. Among the CS HHs, 49.9% had only one SP, 35.6% two SPs and 9.10% three SPs. The corresponding figures for non-CS sick HHs were : 63.8%, 27.2% and 7.4% respectively. The proportion of single-SP HHs among CS HHs was 47.6% in rural areas compared to 55.4% in the urban areas.

The corresponding figures for non-CS sick HHs were higher : 62.3% and 67.2% respectively. The average number of sick persons was 1.7 in CS HHs and 1.5 in non-CS sick HHs. Both indicate more sickness in CS HHs.

2.4.3 ***Female SPs*** : Among the 2,935 sick HHs, 33.6% had no female SP, 56.6% one female SP and 8.5% two female SPs. Rural-urban differences in this pattern were negligible. Among the CS HHs, 36.7% had no female SP, 51.9% one female SP and 8.4% two female SPs. The corresponding figures for non-CS sick HHs were : 33.3%, 57.1% and 8.5% respectively. The proportion of single female SP HHs among CS HHs was 35.4% in the rural sample as compared to the urban sample (39.8%). The corresponding figures for non-CS sick HHs were 32.6% and 35.1% respectively. The average number of female SPs was 0.8 in both CS and non-CS sick HHs.

2.4.4 ***SPs of age 15 or more*** : Among the sick HHs, 13.4% did not have any SP of age 15 or more (9.0% rural and 18.2% urban). While the proportion of sick HHs which had one SP of age 15 or more was almost the same in rural and urban areas, those with two SPs of age 15 or more was higher in rural areas (23.4%) compared to urban areas (17.5%). Among CS HHs, the proportion with one SP of age 15 or more was 58.5%, with two SPs 31.6% and with three SPs 8.1%. In non-CS sick HHs, the corresponding figures were 62.5%, 20.7%, and 3.4% respectively and showed a steeper decline. This pattern was observed in both rural and urban areas. The average number of SPs of age 15 or more was 1.6 in CS HHs and 1.1 in non-CS sick HHs.

2.4.5 ***Female SPs of age 15 or more*** : There was no female SP of age 15 or more in 41.5% of the sick HHs. This proportion was less in rural areas (39.5%) compared to urban areas (46.2%). The percentage of sick HHs with one female SP of age 15 or more was 53 (55.1 rural and 48.5 urban). The pattern was similar in both CS and non-CS sick HHs. The average

number of female SPs of age 15 or more was 0.7 in CS HHs and 0.6 in non-CS sick HHs.

2.4.6 ***Number of CS in HH*** : Out of the 247 CS HHs, 239 (96.8%) had only one CS and 8 (3.2%) two CS in the HH. The average number of CS per HH was only marginally more than one (1.03). The pattern was similar in both rural and urban areas.

2.4.7 ***Number of Female CS in HH*** : Among the CS HHs, 62.6% did not have a female CS and the remaining 37.4% had one female CS. The average number of female CS in the CS HHs was 0.4 in both rural and urban areas.

2.5 Prevalence of Sickness

2.5.1 ***Prevalence during last six months*** : Information about persons who were sick at any time during the past six months was collected from each HH. About one-fifth (21.6%) of the population was found to be sick (22.6% rural and 19.3% urban). Prevalence of sickness was slightly more among females (22.7%) as compared to males (20.6%). Those who had cough, upper respiratory infection and breathing problems formed 8.1% and those who had cough (alone or in combination with other related symptoms) formed 6.4% (6.5% rural and 6.0% urban. Persons having cough along with fever, or chest pain or blood in sputum were 4.7% (4.9% rural and 4.2% urban). Cough of duration more than three weeks formed 1.5% (1.8% rural and 0.9% urban). Those who had productive cough also (i.e., chest symptomatics (CS) as defined under RNTCP) were 1.4%. This percentage was more than double in rural areas (1.7%) compared to urban areas (0.8%). **The prevalence of CS was 1.8% among males and 1.0% among females. This sex difference in prevalence was more pronounced in rural areas** (2.1% for males and 1.2% for females) compared to urban areas (1.0% for males and 0.6% for females). The number of CS were 255 of which 169 were in rural areas and 86 in urban areas. Of the 255 CS, 162 (63.5%) were males and 93 (36.5%) females.

2.5.2 ***Main Groups of Symptoms*** : On the basis of the reported symptoms, five groups with similar symptoms were formed. Thus, of the 4320 sick persons, 1,666 (38.6%) had cough, upper respiratory infection (URI) or breathing problems, 806 (18.7%) had fever, 574 (13.3%) diarrhoea or other abdominal problems, 717 (16.6%) general problems such as pains and aches and 557 (12.9%) other symptoms / health problems.

2.5.3 ***Prevalence rate for Cough*** : Age-sex prevalence rates were calculated for the first four of the five groups (which together formed 87.1% of the sick persons) (Table 3). **The cough group generally had higher prevalence in older age groups. This trend was more prominent among rural males**, with a steady and substantial increase from 5.4% for 15-24 years to 19.6% for 55-64 years. Among rural and urban females and urban males, the prevalence rates were comparatively smaller generally in the older age groups and the increasing trend was not so prominent. Urban males and females had a high prevalence rate in the 0-4 age group and to a lesser extent in the 5-14 age group. For all age groups beyond 15 years the prevalence rates for the cough group was smaller in urban areas compared to rural areas.

2.5.4 ***Prevalence rate for Fever*** : The prevalence rates for the fever group in rural areas were consistently higher in all age groups except for 0-4 and 15-24 age groups among females compared to males. Urban females and males also showed the same pattern of differences except for 35-44 age group, but the differences were generally smaller than those in the rural prevalence rates. This prevalence rate was higher in rural areas for most of the age groups, particularly for 25-34, 35-44, 45-54 and 65+.

2.5.5 ***Prevalence rate for general problems and Diarrhoea*** : The prevalence rates for general problems were substantially higher among females as compared to males in most of the age groups in rural and urban areas. This rate was consistently higher in the rural areas as compared to urban

Table 3
Prevalence rate for certain groups of sickness in different age – sex groups (Mysore district)

Sickness group sex and residence	Prevalence rate (%) in age group								
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Cough, upper respiratory and breathing problems									
Rural : Males	8.0	5.5	5.4	7.0	12.5	15.2	19.6	17.0	*9.1*
Females	8.5	4.8	7.7	6.9	9.2	8.6	11.3	9.1	*7.5*
Urban : Males	19.7	7.7	5.5	3.9	7.8	10.9	10.8	15.7	*8.2*
Females	14.1	7.0	5.3	6.2	10.3	9.4	8.9	12.0	*8.1*
Rural : M & F	8.3	5.2	6.5	7.0	10.9	12.1	15.7	12.8	*8.3*
Urban : M & F	17.1	7.4	5.4	5.1	8.9	10.2	9.9	13.7	*8.1*
2. Fevers									
Rural : Males	7.4	2.0	4.1	3.4	4.2	4.8	3.2	2.6	*3.7*
Females	3.6	3.4	3.7	7.3	6.2	6.2	6.6	6.8	*5.1*
Urban : Males	4.4	3.1	2.9	2.4	3.5	2.0	4.2	2.5	*3.0*
Females	6.3	3.7	4.1	4.4	3.2	3.4	6.2	2.7	*4.1*
Rural : M & F	5.4	2.7	3.9	5.5	5.2	5.5	4.8	4.9	*4.4*
Urban : M & F	5.3	3.4	3.7	3.4	3.4	2.7	5.1	2.6	*3.5*
3. General Problems									
Rural : Males	0.0	1.1	2.7	3.4	3.9	4.6	6.1	8.3	*3.0*
Females	0.3	1.1	2.5	6.7	11.4	8.4	10.1	8.7	*5.2*
Urban : Males	0.5	0.9	1.4	2.3	1.9	2.9	3.5	3.0	*1.7*
Females	0.6	0.6	1.6	4.9	9.5	9.2	8.1	7.6	*4.2*
Rural : M & F	0.1	1.1	2.6	5.2	7.6	6.4	8.0	8.5	*4.1*
Urban : M & F	0.5	0.7	1.5	3.6	5.4	6.0	5.7	5.5	*3.0*
4. Diarrhoca & other abdominal problems									
Rural : Males	1.8	1.8	2.3	3.2	6.4	7.2	6.1	1.7	*3.5*
Females	1.8	1.5	2.3	6.1	5.1	6.4	4.7	1.5	*3.6*
Urban : Males	1.0	1.4	1.0	1.6	3.0	3.6	4.5	3.0	*2.0*
Females	2.3	0.7	1.2	2.7	3.9	4.6	5.4	0.4	*2.3*
Rural : M & F	1.8	1.6	2.3	5.2	5.8	6.8	5.4	1.6	*3.5*
Urban : M & F	1.6	1.0	1.1	2.2	3.4	4.1	5.0	1.7	*2.1*

areas except for the 0-4 age group. The prevalence rate for the Diarrhoea group was also consistently higher in rural areas as compared to urban areas, except for the 65+ age group.

2.5.6 ***Prevalence of cough and other symptoms by sex*** : Comparison of prevalence rates for cough (CO) and other sickness (OS) for different groups of population in rural and urban areas (Table 4) shows some interesting findings. While prevalence rate for cough (CO) was more among males compared to females in both rural and urban areas, it was the reverse for other symptoms (OS).

2.5.7 ***Prevalence of CO and OS by Age :*** **Prevalence rate for both CO and OS in rural areas showed a decline from 0-4 to 15-14 age group and thereafter increased with age** but for a slight drop in the 65+ age group for CO and a steadying of the rate after 45-54 for OS. The pattern was similar in urban areas except for the initial decline continuing upto 25-34 age group and a substantial increase for 65+ age group, for CO. **Another interesting finding is that the percentage of persons with cough for more than three weeks out of those having cough generally increased steadily with age**. The relevant figures are : in rural areas, 5.4% for (0-4), 11.0% for (5-14), 10.6% for (15-24), 27.1% for (25-34), 29.5% for (35-44), 38.0% for (45-54), 37.3% for (55-64) and 58.9% for (65+). The corresponding figures for urban areas were : 5.5%, 3.3%, 10.6%, 13.7%, 25.8%, 25.0%, 26.9% and 32.6%. **Thus, in the age groups with higher and higher prevalence rates for cough, the percentage having cough for more than three weeks also increased leading to larger and larger number of persons with cough for more than three weeks with increase in age. This was so in both rural and urban areas.**

Table 4

Prevalence rates for cough (CO) and other symptoms (OS) in different population groups (Mysore district)

Population groups	Rural			Urban		
	Population (all ages)	Prevalence rate (%)		Population (all ages)	Prevalence rate (%)	
		CO	OS		CO	OS
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. **Total**	10,151	6.5	16.1	10,495	6.0	13.2
2. **Sex** : Female	5,044	5.9	17.4	5,138	5.4	15.6
Male	5,107	7.0	14.9	5,357	6.6	11.0
3. **Age** : 0 – 4	725	5.1	10.6	732	12.4	12.4
5 – 14	2,287	3.6	8.6	2,223	5.5	8.9
15 – 24	2,029	4.6	12.0	2,213	4.2	8.9
25 – 34	1,607	5.3	19.5	1,889	3.9	12.4
35 – 44	1,353	9.0	23.4	1,432	6.5	17.0
45 – 54	950	10.5	24.6	885	7.2	21.4
55 – 64	536	13.6	24.4	545	7.5	25.0
65+	492	10.2	24.2	422	10.2	24.2
4. **Type of family**						
Nuclear	4,226	7.3	19.9	5,210	7.0	15.5
Joint	5,324	6.0	13.5	3,711	5.6	12.2
Extended	601	4.2	12.8	1,574	3.6	8.2
5. **Family Size**						
1 – 3	814	7.2	27.4	1,107	8.1	21.1
4 – 6	5,835	6.7	17.4	5,704	6.7	14.7
7 – 9	2,041	7.4	12.1	2,002	5.1	9.3
10+	1,461	3.9	10.5	1,682	3.5	7.5
6. **No. of females in the HH**						
0 – 1	1,379	7.3	24.4	1,613	8.6	17.4
2 – 3	5,455	6.6	16.6	5,479	6.2	14.5
4 – 5	2,238	6.5	12.6	2,158	5.3	10.0
6+	1,079	4.5	10.8	1,245	3.1	7.6
7. **Education**						
Illiterate	5,127	7.6	19.4	3,072	6.1	17.6
Below SSC	3,071	5.6	14.1	3,876	5.5	12.2
SSC +	682	4.4	16.3	2,428	4.3	11.3
8. **Religion & caste**						
SC/ST	2,873	7.2	16.4	2,406	3.6	8.7
BCs	6,051	6.7	16.4	5,704	5.6	12.4
Other Hindus	1,196	3.6	14.3	1,307	12.3	16.1
Muslims	27	NC	NC	847	5.5	7.6
Other	4	NC	NC	227	7.5	17.6

(1)	(2)	(3)	(4)	(5)	(6)	(7)
9. **Occupation**						
A: a) Unemployed	404	*11.9*	*21.3*	640	*7.8*	*14.2*
b) Students (age 15+)	1,737	*4.0*	*8.9*	2,237	*5.7*	*9.5*
Sub Total	**2,141**	**5.5**	***11.2***	**2,877**	**5.7**	**10.5**
B: a) Housewives	1,879	*7.6*	*21.3*	2,364	*5.0*	*17.7*
b) Housewife cum workers	452	*5.5*	*24.6*	77	*NC*	*NC*
Sub Total	**2,331**	**7.2**	***21.9***	**2,441**	**5.0**	***17.9***
C: Employed - Labour :						
a) Skilled	167	*6.0*	*13.2*	1,012	*4.8*	*12.0*
b) Unskilled	111	*12.6*	*18.9*	659	*6.8*	*14.1*
Sub Total	**278**	**8.6**	***15.5***	**1,671**	**5.6**	***12.8***
D: Employed – others :						
a) Agriculture & allied work	3,513	*7.6*	*18.8*	548	*5.5*	*16.4*
b) Business & allied HH Industry	123	*6.5*	*18.7*	1,244	*5.8*	*15.4*
c) Others	63	*NC*	*NC*	325	*4.6*	*10.5*
Sub Total	**3,699**	**7.5**	***18.7***	**2,117**	**5.5**	***14.9***
E: All employed	3,977	*7.6*	*18.5*	3,788	*5.6*	*14.0*

NC - Not Calculated because of small numbers

2.5.8 ***Prevalence of CO and OS by type of Family, Family size and number of females in HH*** : All the four prevalence rates (rural/urban and CO/OS) were highest for nuclear families followed by joint families and extended families (least). Similarly, all the four rates decreased steadily with increase in family size and in number of females in the family. The only exception was that the highest prevalence rate for CO was found in families with 7-9 members (7.4%). **Surprisingly, the prevalence rates for CO and OS were least in the largest families and those with the maximum number of females in the family**, the latter possibly being a reflection of large family size. The difference in rates between the types of families mentioned earlier may also be due to increase in family size.

2.5.9 ***Prevalence of CO and OS : By Education Status :*** Prevalence rate in rural areas was highest among illiterates (7.6% for CO and 19.4% for OS). **There was a steady decline in prevalence rate for CO with increase in the level of education in both rural and urban areas and for OS in urban areas.**

2.5.10 ***Prevalence of CO and OS : By Religion and Caste:*** In rural areas, prevalence for CO was least among Hindus other than SC/ST and BCs (other Hindus) (3.6%) and highest among SC/ST (7.2%), with BCs in between and close to SC/ST (6.7%). But the opposite situation was observed among these three caste groups in urban areas with least prevalence rate for CO among SC/ST (3.6%) and the highest among other Hindus (12.3%), with that among BCs in between (5.6%). This latter pattern was observed for prevalence rate for OS in urban areas. The prevalence rate for CO among urban Muslims (5.5%) did not differ from that among urban BCs (5.6%).

2.5.11 ***Prevalence of CO and OS : By Occupation :*** Prevalence rate for CO in rural areas was highest among unskilled labour (12.6%) and unemployed (11.9%) followed by housewives and those engaged in agriculture and allied work (7.6% each). It was least among students of age 15+ (4.0%).

The prevalence rate for OS was highest among housewives – cum – workers (24.6%) followed by housewives and unemployed (21.3% each), unskilled labour (18.9%) or those engaged in agriculture and allied work (18.8%) or business and allied HH Industry (18.7%) and skilled labour (13.2%). It was also least among students (8.9%). In urban areas, the prevalence rate for CO did not vary much between different occupation groups (range of 4.6% to 5.8%) except for slightly higher rates for unskilled labour (6.8%) and unemployed (7.8%). The prevalence rate for OS was highest among housewives (17.7%) followed by those engaged in agriculture and allied work (16.4%), those engaged in business and allied HH industry (15.4%), unemployed (14.2%) or unskilled labour (14.1%) and skilled labour (12.0%). As for the other three rates, this rate also was lowest among students (9.5%). Overall, another group which had low prevalence rate was skilled labour. Unskilled labour generally had high rates.

2.6 Duration of Sickness

2.6.1 ***Duration of Sickness in Rural and Urban Areas*** : Information on duration of sickness was available for 91.6% of the SPs, in rural areas and 87.3% in urban areas. Among them, duration was less than 8 days for 55.0%, 8-14 days for 7.8%, 15-21 days for 7.4%, 22-28 days for 0.5% and 29 days or more for 29.2%. The corresponding figures for urban areas were 62.2%, 6.0%, 7.1%, 0.3% and 24.4% respectively. Though the pattern was similar in both rural and urban areas, the percentage for duration of less than 8 days was slightly higher and that for duration of 29 days or more slightly lower in urban areas compared to rural areas.

2.6.2 ***Duration of Sickness : By Main Groups*** : Table 5 shows the duration of sickness for persons with four main groups of symptoms. **For all the four groups in both rural and urban areas two peaks are evident, one for symptoms of less than 8 days duration and the other for symptoms of 29 days or more**. The proportion of persons with

Table 5

Duration of sickness for persons with four main groups of symptoms (Mysore district)

Symptom group		Duration of sickness (in days)					Sick Persons
		< 8	8 – 14	15 – 21	22 – 28	29 +	
(1)		(2)	(3)	(4)	(5)	(6)	(7)
Rural							
Cough	No.	477	85	61	3	205	831
	%	*57.4*	*10.2*	*7.3*	*0.4*	*24.7*	
Fevers	No.	372	33	18	1	16	440
	%	*84.5*	*7.5*	*4.1*	*0.2*	*3.6*	
Diarrhoea	No.	148	18	20	1	167	354
	%	*41.8*	*5.1*	*5.6*	*0.3*	*47.2*	
General problems	No.	127	11	32	4	237	411
	%	*30.9*	*2.7*	*7.8*	*1.0*	*57.7*	
Urban							
Cough	No.	561	68	44	3	159	835
	%	*67.2*	*8.1*	*5.3*	*0.4*	*19.0*	
Fevers	No.	311	20	26	1	8	366
	%	*85.0*	*5.5*	*7.1*	*0.3*	*2.2*	
Diarrhoea :	No.	91	5	7	1	116	220
	%	*41.4*	*2.3*	*3.2*	*0.5*	*52.7*	
General problems	No.	101	8	27	1	169	306
	%	*33.0*	*2.6*	*8.8*	*0.3*	*55.2*	

symptoms of duration 8-14 days, 15-21 days and 22-28 days was quite small (varying from 0.2% to 10.6%). For cough and fever groups, the first peak had very high frequencies in both rural and urban areas, with proportion having cough being more in urban areas (72.2%) compared to rural areas (59.6%). **Duration of 29+ days, which probably indicates the start of chronic sickness, was negligible for the fever group** – 3.6% (rural) and 2.2% (urban) **but showed somewhat higher frequencies for the cough group** – 24.7% (rural) and 19.0% (urban). Among persons with symptoms of the diarrhoea group, about 40% reported duration of less than 8 days in both rural and urban areas. Frequency for duration of 29+ days was higher in urban areas (52.7%) compared to 47.2% in rural areas. Both indicate substantial proportion with chronic sickness in this group. The proportion of persons reporting duration of less than 8 days was the lowest for general problems. This group also had the highest frequencies for duration of 29+ days – 57.7% (rural) and 55.2% (urban) – **indicating that chronic sickness may be much more for those with general problems like aches and pains**. The vast majority of persons reporting duration of 29+ days for each of the four groups of symptoms actually had duration of 90 days or more.

2.7 Action taken by sick persons (all HHs)

2.7.1 ***Action taken by Rural SPs : By Type of Sick HH*** : Action taken when someone was sick during the last six months in different types of sick HHs in rural areas is shown in Table 6. This information was available for 99.7% (99.4% in CS HHs and 99.8% in non-CS sick HHs). While 4.7% did not take any action, 2.9% did not consult any health facility (purchased and took drugs, had traditional / home remedy, etc). **The remaining 92% (almost same among CS and non-CS sick HHs) contacted some health facility, some of them contacting more than one. Those consulting only primary level facilities (PMP and PHC) formed 71.0%**. This proportion was much less among CS HHs (47.0%) compared to non-CS HHs (74.1%). Direct use of secondary level facilities alone was also

Table 6
Action taken by HHs when some was sick during the last six months in rural Mysore, by type of HH.

Health facility contacted	Sick HHs					
	CS		Non – CS		Total	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. No action	6	*3.7*	64	*4.8*	70	*4.7*
2. Action without medical consultation	6	*3.7*	38	*2.9*	44	*2.9*
3. Primary level						
a) PMP	26	*15.9*	376	*28.2*	402	*26.8*
b) PHC	30	*18.3*	546	*41.0*	576	*38.4*
c) PMP & PHC	21	*12.8*	66	*5.0*	87	*5.8*
Sub Total	**77**	***47.0***	**988**	***74.1***	**1,065**	***71.0***
4. Secondary level						
a) GH	4	*2.4*	133	*10.0*	137	*9.1*
b) NGH	2	*1.2*	32	*2.4*	34	*2.3*
c) GH & NGH	1	*0.6*	3	*0.2*	4	*0.3*
Sub - Total	**7**	***4.3***	**168**	***12.6***	**175**	***11.6***
5. Primary & Secondary level						
a) PMP & GH	9	*5.5*	25	*1.9*	34	*2.3*
b) PMP& NGH	4	*2.4*	3	*0.2*	7	*0.5*
c) PMP & Sanatorium	8	*4.9*	0	*0.0*	8	*0.5*
d) PMP & 2 other facilities	23	*14.0*	3	*0.2*	26	*1.7*
e) PHC & GH	14	*8.5*	29	*2.2*	43	*2.9*
f) PHC & NGH	3	*1.8*	7	*0.5*	10	*0.7*
Sub – total	**61**	***37.2***	**67**	**5.0**	**128**	**8.5**
6. Other combinations (mostly 3 or more facilities)	6	*3.7*	5	*0.4*	11	*0.7*
7. Not stated	1	*0.6*	3	*0.2*	4	*0.3*
Total	**164**		**1,333**		**1,497**	
Total contribution (alone or in combination) by:						
a) PMP	91	*55.8*	473	*35.6*	564	*37.8*
b) PHC	68	*41.7*	648	*48.7*	716	*48.0*
c) GH	28	*17.2*	190	*14.3*	218	*14.6*
d) NGH	10	*6.1*	45	*3.4*	55	*3.7*

PMP - Private Medical Parctitioner
PHC - Primary Health Centre
GH - Government Hospital
NGH - Non - Govt Hospital

much less by CS HHs (4.3%) compared to non-CS sick HHs (12.6%). The net result was that those consulting both primary and secondary level services were much more among CS HHs (37.2%) compared to non-CS sick HHs (5.0%). Table 6 (item 5) shows six types of combinations of primary and secondary level facilities. The most frequent combination for CS HHs was PMP and two more facilities (i.e., using three facilities in all) with 14% doing so followed by PHC and government hospital (8.5%), PMP and government hospital (5.5%) and PMP and sanatorium (4.9%). **Hardly any of the SPs in CS HHs had visited the District Tuberculosis Centre (DTC), even on referral from the primary level** (not shown in the Table).

2.7.2 ***Popularity of different types of Health facilities among Rural SPs:*** The lowest part of Table 6 shows that **the facility which was used most (either alone or in combination with others) was PHC (48.0%),** the proportion for CS HHs and non – CS sick HHs being 41.7% and 48.7% respectively. Next came PMP (37.8%), government hospital (14.6%) and non-government hospital (a negligible 3.7%). While **the most popular facility among CS HHs was PMP (55.8%) followed by PHC** (41.7%), among non-CS sick HHs, PHC was most popular (48.7%) followed by PMP (35.6%). Though hospitals were not used so often, CS HHs used this facility comparatively more than non-CS sick HHs. The relevant figures are 17.2% and 14.3% for government hospital and 6.1% and 3.4% for non – government hospital.

2.7.3 ***Action taken by Urban SPs :*** By type of Sick HHs : Table 7 shows the action taking pattern in urban areas. Information was available for 99.7% (100% for CS HHs and 99.7% for non-CS sick HHs). While 1.9% did not take any action, 4.2% did not consult any health facility. **The remaining 93.6% (91.6% for CS HHs and 93.8% for non-CS sick HHs) visited some health facility, some of them using multiple facilities. Those visiting only primary level facilities formed 54.5% which was less than 71.0% in rural areas** (Table 6). This proportion was less among CS HHs (39.8%) compared to non-CS sick HHs (55.4%). The direct use of

Table 7

Action taken by HHs when someone was sick during the last six months in urban Mysore, by type of HH

Health facility contacted	Sick HHs					
	CS		Non – CS		Total	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. **No action**	5	*6.0*	23	*1.7*	27	*1.9*
2. **Action without medical consultation**	2	*2.4*	58	*4.3*	60	*4.2*
3. **Primary level**						
a) PMP	3	*39.8*	739	*54.5*	772	*53.7*
b) PHC	0	*0.0*	11	*0.8*	11	*0.8*
c) PMP & PHC	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**33**	***39.8***	**750**	***55.4***	**783**	***54.5***
4. **Secondary level**						
a) GH	6	*7.2*	303	*22.4*	309	*21.5*
b) NGH	0	*0.0*	95	*7.0*	95	*6.6*
c) GH & NGH	2	*2.4*	12	*0.9*	14	*1.0*
Sub - total	**8**	***9.6***	**410**	***30.3***	**418**	***29.1***
5. **Primary & Secondary level**						
a) PMP & GH	10	*12.0*	56	*4.1*	66	*4.6*
b) PMP& NGH	4	*4.8*	29	*2.1*	33	*2.3*
c) PMP & sanatorium	7	*8.4*	0	*0.0*	7	*0.5*
d) PMP & 2 other facilities	10	*12.0*	6	*0.4*	16	*1.1*
e) PHC & GH	0	*0.0*	0	*0.0*	0	*0.0*
f) PHC & NGH	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**31**	***37.3***	**91**	***6.7***	**122**	***8.5***
6. **Other combinations (mostly 3 or more facilities)**	4	*4.8*	19	*1.4*	23	*1.6*
7. **Not stated**	0	*0.0*	4	*0.3*	4	*0.3*
Total	**83**		**1,355**		**1,437**	
Total contribution (alone or in combination) by						
a) PMP	64	*77.1*	830	*61.5*	894	*62.4*
b) PHC	0	*0.0*	11	*0.8*	11	*0.8*
c) GH	18	*21.7*	371	*27.5*	389	*27.1*
d) NGH	6	*7.2*	136	*10.1*	142	*9.9*

secondary level facilities followed the same pattern, corresponding figures being 9.6% and 30.3% respectively for CS HHs and non-CS sick HHs. Those using secondary facilities alone was higher in urban areas (29.1%) compared to 11.6% in rural areas (Table 6). As a result of this behaviour pattern, **those using both primary and secondary levels was much higher among CS HHs (37.3%) compared to non-CS sick HHs** (6.7%) which was quite similar to that in rural areas with percentages of 37.2 and 5.0 respectively. The most common combination in urban areas was PMP and government hospital (4.6%) followed by PMP and non-government hospital (2.3%), both quite small. The use of these two combinations was higher among CS HHs compared to non-CS sick HHs. The relevant figures for the first combination were 12.0% and 4.1% respectively and those for the second combination were 4.8% and 2.1%. While **none of the CS HHs had used the District Tuberculosis Centre**, 8.4% had used the combination of PMP and sanatorium.

2.7.4 ***Popularity of different types of Health facilities among Urban SPs:*** The lower part of Table 7 shows that **the facility which was used most (either alone or in combination with others) was PMP** (62.4%), the proportion for CS HHs and non-CS sick HHs being 77.1% and 61.5% respectively. Next came government hospital (27.1%) followed by non-government hospital (9.9%). Government hospital was preferred by both types of HHs to non-government hospital. The relevant figures for CS HHs were 21.7% and 7.2% and for non-CS sick HHs 27.5% and 10.1%, the latter type of HH making more use of either type of hospital.

2.7.5 ***Action taken by Rural CO and OS*** : Action taken by persons suffering from cough and other symptoms in rural areas is shown in Table 8. The relevant information was available from close to 100% for the three groups shown. **The most striking finding from Table 8 is that persons with cough for more than three weeks behaved differently from those with cough of less than or equal to three weeks and with other symptoms**. About three-fourths of the last two groups contacted primary level facilities

Table 8

Action taken by persons suffering from cough and other symptoms during the last six months in rural Mysore.

Health facility contacted	Sick HHs					
	Cough ≤ 3 weeks		Cough > 3 weeks		Other Sysmptoms	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. **No action**	48	*10.6*	20	*11.2*	121	*7.4*
2. **Action without medical consultation**	12	*2.5*	5	*2.8*	48	*2.9*
3. **Primary level**						
a) PMP	115	*24.1*	32	*18.0*	461	*28.2*
b) PHC	260	*54.5*	29	*16.3*	743	*45.5*
c) PMP & PHC	5	*1.0*	19	*10.7*	14	*0.9*
Sub - total	**380**	***79.7***	**80**	***44.9***	**1,218**	***74.5***
4. **Secondary level**						
a) GH	27	*5.7*	4	*2.2*	182	*11.1*
b) NGH	6	*1.2*	2	*1.1*	40	*2.4*
c) GH & NGH	0	*0.0*	1	*0.6*	1	*0.1*
Sub - total	**33**	***6.9***	**7**	***3.9***	**223**	***13.6***
5. **Primary & Secondary level**						
a) PMP & GH	1	*0.2*	12	*6.7*	7	*0.4*
b) PMP& NGH	0	*0.0*	6	*3.4*	3	*0.2*
c) PMP & sanatorium	0	*0.0*	8	*4.5*	0	*0.0*
d) PMP & 2 other facilities	0	*0.0*	15	*8.4*	0	*0.0*
e) PHC & GH	2	*0.4*	13	*7.3*	6	*0.4*
f) PHC & NGH	0	*0.0*	3	*1.7*	0	*0.0*
Sub - total	**3**	***0.6***	**57**	***32.0***	**16**	***1.0***
6. **Other combinations (mostly 3 or more facilities)**	1	*0.2*	9	*5.1*	8	*0.5*
7. **Not stated**	0	*0.0*	2	*1.1*	5	*0.3*
Total	**477**		**180**		**1,639**	
Total contribution (alone or in combination) by						
a) PMP	121	*25.4*	92	*51.7*	485	*29.7*
b) PHC	267	*56.0*	64	*36.0*	763	*46.7*
c) GH	30	*6.3*	30	*16.9*	196	*12.0*
d) NGH	6	*1.3*	12	*6.7*	44	*2.7*

alone, about half visiting the PHC and about one-fourth PMP. Visiting both primary and secondary level facilities was negligible. In contrast, less than half of those with cough of three weeks or more only contacted primary level alone and about one-third visited various combinations of primary and secondary level facilities, depicting hectic efforts by visiting multiple centres to get relief of their suffering. **Surprisingly, only two out of 180 persons with cough for more than three weeks (1.1%) visited DTC**, one in combination with GH and the other with sanatorium. Among these 180 persons, 13 (7.2%) only visited sanatorium, two directly, eight in combination with PMP and one each in combination with PHC, GH and DTC.

2.7.6 ***Popularity of different types of Health facilities among CO and OS:*** The total contribution of PMP (alone or in combination with others) was one-fourth or more for those with cough for less than or equal to three weeks and with other symptoms, while it was about half for those with cough for more than three weeks. The total contribution of PHC was 36.0% for those with cough for more than three weeks, 46.7% for those with other symptoms and 56.0% for those with cough for less than or equal to three weeks. This increasing trend among the above three symptom groups is exactly the opposite of the decreasing trend among them in using PMP, the relevant figures being 51.7%, 29.7% and 25.4% respectively. The contribution by hospital (government or non-government) was much less, the maximum being 16.9% for those with cough for more than three weeks.

2.7.7 ***Action taken by Urban CO and OS :*** Table 9 shows that the situation was similar in urban areas also. The main difference was a reduction in those contacting primary level facilities and a consequent substantial increase in those contacting secondary level facilities directly. Primary level contacts were almost entirely confined to PMP, PHC being a rural set up. Even in urban areas with a DTC close at hand and easy transport facilities, its contribution was negligible with only **one person out of 94**

Table 9

Action taken by persons suffering from cough and other symptoms during last six months in urban Mysore

Health facility contacted	Sick HHs					
	Cough ≤ 3 weeks		Cough > 3 weeks		Other Sysmptoms	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. **No action**	18	*3.4*	7	*7.8*	40	*2.9*
2. **Action without medical consultation**	26	*4.9*	4	*4.4*	67	*4.8*
3. **Primary level**						
a) PMP	314	*59.1*	41	*45.6*	772	*55.9*
b) PHC	9	*1.7*	0	*0.0*	7	*0.5*
c) PMP & PHC	1	*0.2*	0	*0.0*	0	*0.0*
Sub - total	**324**	***61.0***	**41**	***45.6***	**779**	***56.4***
4. **Secondary level**						
a) GH	122	*23.0*	9	*10.0*	327	*23.7*
b) NGH	30	*5.6*	1	*1.1*	5	*0.4*
c) GH & NGH	0	*0.0*	1	*1.1*	5	*0.4*
Sub - total	**152**	***28.6***	**11**	***12.2***	**337**	***24.4***
5. **Primary & Secondary level**						
a) PMP & GH	3	*0.6*	9	*10.0*	10	*0.7*
b) PMP& NGH	0	*0.0*	2	*2.2*	9	*0.7*
c) PMP & sanatorium	0	*0.0*	6	*6.7*	0	*0.0*
d) PMP & 2 other facilities	0	*0.0*	10	*11.1*	2	*0.1*
e) PHC & GH	0	*0.0*	0	*0.0*	0	*0*
f) PHC & NGH	0	*0.0*	0	*0.0*	0	*0*
Sub - total	**3**	***0.6***	**27**	***30.0***	**21**	***1.5***
6. **Other combinations (mostly 3 or more facilities)**	8	*1.5*	0	*0.0*	16	*1.2*
7. **Not stated**	7	*1.3*	4	*4.3*	5	*0.4*
Total	**538**		**94**		**1,387**	
Total contribution (alone or in combination) by						
a) PMP	318	*59.9*	68	*75.6*	793	*57.4*
b) PHC	10	*1.9*	0	*0.0*	7	*0.5*
c) GH	125	*23.5*	19	*21.1*	342	*24.7*
d) NGH	30	*5.6*	4	*4.4*	19	*1.4*

persons with cough for more than three weeks (1.1%) contacting a PMP and DTC. The contribution of the sanatorium (which was also similarly located) was comparatively more but still negligible, with only eight persons with cough for more than three weeks (8.5%) visiting it (one directly, six in combination with PMP and the other with GH).

2.7.8 ***Action taken by Main Groups of Symptoms:*** Comparison of the action taking pattern among the five main groups of symptoms in rural areas showed that the **vast majority of the first four groups viz., cough, fevers, diarrhoea and general problems visited primary health facilities,** the percentages being 69.3, 82.5, 77.1 and 69.1 respectively. The higher figure for the fevers group was due to more of them visiting PMP (36.1%) in addition to PHC as against 22.6%, 27.7% and 24.3% respectively for cough, diarrhoea and general problems, since the visits to PHC by all the four groups were almost equal within a range of 44.8% to 49.4%. Visits by the last group of other symptoms were to PHC (33.3%), PMP (24.5%) and direct visits to secondary facilities (25.3%). The percentage visiting secondary level facilities varied from 7.2 to 15.3 among the first four main groups. The situation was similar in the urban areas with visits to primary level facilities being almost completely confined to PMP since PHC is a rural set up. **The most striking difference between rural and urban areas was the higher direct use of secondary level facilities in urban areas**. This percentage showed a steady increase from 22.1% for fevers to 26.8% for cough, to 32.4% for general problems, to 40.5% for diarrhoea and to 44.2% for other symptoms. The corresponding figures for rural areas were 8.0%, 7.2%, 12.9%, 15.3% and 25.3% respectively. Where secondary level facilities are available, as in urban areas, sizeable proportions of sick persons visit these facilities directly. However, this proportion showed wide variations among different diseases.

2.7.9 ***Action taken by CO and OS*** : One striking finding from Tables 8 and 9 is that in both rural and urban areas, **the proportion making direct use of primary or secondary level facilities was least among persons suffering from cough for more than three weeks compared to those with cough of lesser duration or with other symptoms**. The proportion making use of both levels was much higher for persons with cough for more than three weeks (32% rural and 30% urban) compared to that among the other two groups which had only negligible proportions (1.5% or less). It is significant that still about 45% of those with cough for more than three weeks had made use of primary level facilities only.

2.7.10 ***Action taken by Rural SPs for different durations of sickness***: The different types of action taken by persons with different durations of sickness is shown in Table 10 for rural areas. It may be pointed out that the information collected gives only the approximate interval between onset of symptoms and taking of action and the findings from this Table should only be considered to give some broad indications and possible hypotheses for planning further studies. **Action at primary level was taken by 79.2% of SPs with duration of 0-7 days, 76.5% with duration of 8-28 days and 63.5% with duration of 29 days or more (29+) showing a steady decline in use of primary level facilities with time**. The reduction in the percentage visiting PHC from 50.3% for the first two durations to 35.4% for the last duration resulted in the lower figure for visits to primary level after 29 days or more. It is significant that **even after 29 days more than 60% had visited or continued to visit primary level facilities** (24.7% visiting PMP and 35.4% PHC). Those directly visiting secondary facilities increased from 8.6% for 0-7 days to 12.7% for 8-28 days and to 15.2% for 29+ days. The same trend was shown for those visiting both primary and secondary level facilities, the respective percentage being 0.3, 1.8 and 8.3. It is significant that, **for each duration, the direct use of secondary level was much more than its use after visiting primary level facilities**. Among those with duration

Table 10

Action taken according to duration of sickness in rural Mysore.

Health facility contacted	Duration of sickness in days								
	<8			8 – 28			29+		
	No.	% (1)	% (2)	No.	% (1)	% (2)	No.	% (1)	% (2)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. **No action**	88	*7.6*	46.6	26	*7.8*	13.8	75	*9.3*	39.7
2. **Action without medical consultation**	45	*3.9*	69.2	3	*0.9*	4.6	17	*2.1*	26.2
3. **Primary level**									
a) PMP	332	*287*	54.5	79	*23.8*	13.0	198	*24.7*	32.5
b) PHC	581	*50.3*	56.3	167	*50.3*	16.2	284	*35.4*	27.5
c) PMP & PHC	2	*0.2*	5.3	8	*2.4*	21.1	28	*3.5*	73.7
Sub - total	**915**	***79.2***		**254**	***76.5***		**510**	***63.5***	
4. **Secondary level**									
a) GH	91	*7.9*	42.7	35	*10.5*	16.4	87	*10.8*	40.8
b) NGH	8	*0.7*	16.7	7	*10.5*	14.6	33	*4.1*	68.8
c) GH & NGH	0	*0.0*	NC	0	*0.0*	NC	2	*0.2*	NC
Sub - total	**99**	***8.6***		**42**	***12.7***		**122**	***15.2***	
5. **Primary & Secondary level**									
a) PMP & GH	2	*0.2*	0	0	*0.0*		18	2.2	NC
b) PMP& NGH	0	*0.0*		0	*0.0*		9	*1.1*	NC
c) PMP & sanatorium	0	*0.0*		0	*0.0*		8	*1.0*	NC
d) PMP & 2 other facilities	0	*0.0*		0	*0.0*		15	*1.9*	NC
e) PHC & GH	1	*0.1*		6	*1.8*		14	*1.7*	NC
f) PHC & NGH	0	*0.0*		0	*0.0*		3	*0.4*	NC
Sub - total	**3**	***0.3***	**3.9**	**6**	***1.8***	**7.9**	**67**	***8.3***	**88.2**
6. **Other combinations (mostly 3 or more facilities)**	5	*0.4*		1	*0.3*		12	*1.5*	NC
7. **Not stated**	4	*0.3*		0	*0.0*		3	*0.4*	NC
Total	**1,159**			**332**		**15.8**	**806**		
Total contribution (alone or in combination) by									
a) PMP	336	*29.1*	48.1	87	*26.2*	12.4	27.6	*34.4*	39.5
b) PHC	584	*50.6*	53.4	181	*54.5*	16.5	329	*41.0*	30.1
c) GH	94	*8.1*	36.7	41	*12.3*	16.0	121	*15.1*	47.3
d) NGH	8	*0.7*	14.5	7	*2.1*	12.7	40	*5.0*	72.7

Note : 1. % (1) shows the percentage taking each type of action within each duration (vertical percentages)

2. % (2) shows the percentage with each duration within each type of action (horizontal percentages).

less than eight days, visits to PHC (either alone or in combination with others) were most frequent (50.6%) followed by PMP (29.1%), government hospital (8.1%) and non-government hospital (0.7%), each of them alone or in combination with others. For the long duration of 29+ days, the pattern was the same but with more frequent visits to PMP and hospital and less to PHC. The relevant figures were : 41.0% to PHC, 34.4% to PMP, 15.1% to Government Hospital and 5.0% to Non-Government hospital, each of them either alone or in combination with others.

2.7.11 ***Duration for different actions by Rural SPs***: The second set of percentages given in Table 10 shows some interesting possibilities or hypotheses for further investigation. **Among those who did not take any action, 46.6% had their symptoms for less than eight days only** and could have taken action later on with increase in duration of symptoms. But, it is significant that **as large a proportion as 39.7% had symptoms for a long time (29+ days, most of which was 90+ days) showing that for some reason they had either continued to postpone action or decided against it**. Those with duration of 8-28 days formed only 13.8% of the SPs who did not take any action and formed a trough between the two peaks. **Among those who took action without consulting any health facility, 69.2% had the symptoms for less than eight days only** and might have consulted a health facility later on if their symptoms did not subside. But, 26.2% had symptoms for a long time (29+ days) and yet probably continued to take the same type of action without medical consultation or left that also. Again those with duration of 8-28 days formed a trough between the two peaks with a negligible proportion of 4.6%. The pattern was similar among those who had consulted one facility viz., PMP, PHC, GH or NGH, with those consulting early (less than eight days) and very late (29+ days) together constituting 83.5% to 87.0% of those SPs. The trough for duration of 8-28 days had only 13.0% to 16.4% of these SPs. The second peak, which could include delayed action and

repeated action by visiting the same facility, had the least proportion of SPs among those consulting PHC (27.5%) followed by PMP (32.5%), GH (40.8%) and NGH with a very high proportion (68.7%). The above three groups of SPs (viz., those who took no action, or action without medical consultation or consulted only one health facility), which showed a similar pattern with two peaks and a trough in between, together formed 80.1% of the total SPs (98.8% among those with duration of less than eight days and 86.1% among those with duration of 29+days). Thus, SPs in the above mentioned three groups fall into three types, one taking early action (53.1%) another taking very late action (32.2%) and the third in between (14.8%). The first type formed 49.8% of the total SPs and the second type 30.2% (together 80%).

2.7.12 ***Duration for Multiple actions by Rural SPs***: Among those taking dual actions by consulting both PMP and PHC at the primary level, 73.7% had symptoms for 29+ days. Out of those taking dual or multiple actions covering both primary and secondary level health facilities, 88.2% had symptoms for 29+ days, as could be expected. The total contribution by the four types of health facilities also showed the pattern of two peaks and a trough in between. The first peak had higher frequency than the second peak for PMP and PHC at primary level. But, the second peak had higher frequency for GH and NGH at secondary level, the difference in frequency for the two peaks being very large for NGH with a frequency of 72.7% for the second peak.

2.7.13 ***Action taken by Urban SPs for different durations of sickness***: The patterns were similar in urban areas (Table 11). So also some interesting possibilities or hypotheses for further investigation shown by the second set of percentages in Table 11. **With increase in duration of symptoms, the use of primary level facility steadily declined and that of secondary level facilities increased**, this being mainly due to the higher direct use of secondary level facilities and not that of facilities at

Table 11

Action taken according to duration of sickness in urban Mysore.

Health facility contacted	Duration of sickness in days								
	<8			8 – 28			29+		
	No.	% (1)	% (2)	No.	% (1)	% (2)	No.	% (1)	% (2)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. **No action**	29	*2.6*	44.6	8	*3.4*	12.3	28	*4.1*	43.1
2. **Action without medical consultation**	70	*6.4*	72.2	7	*3.0*	7.2	20	*2.9*	20.6
3. **Primary level**									
a) PMP	669	*61.2*	59.2	140	*59.1*	12.4	321	*47.2*	28.4
b) PHC	11	*1.0*	NC	4	*1.7*	NC	1	*0.1*	NC
c) PMP & PHC	1	*0.1*	NC	0	*0.0*	NC	0	*0.0*	NC
Sub – total	**681**	***62.3***		**144**	***60.8***		**322**	***47.4***	**NC**
4. **Secondary level**									
a) GH	247	*22.6*	53.9	52	*21.9*	11.4	159	*23.4*	34.7
b) NGH	53	*4.8*	33.5	17	*7.2*	10.8	88	*12.9*	55.7
c) GH & NGH	1	*0.1*	NC	1	*0.4*	NC	4	*0.6*	NC
Sub - total	301	*27.5*		70	*29.5*		251	*36.9*	
5. **Primary and Secondary level**									
a) PMP & GH	3	*0.3*	13.6	2	*0.8*	9.1	17	*2.5*	77.3
b) PMP & NGH	1	*0.1*	NC	0	*0.0*	NC	10	*1.5*	NC
c) PMP & sanatorium	0	*0.0*	NC	0	*0.0*	NC	6	*0.9*	NC
d) PMP & 2 other facilities	0	*0.0*	NC	1	*0.4*	NC	11	*1.6*	NC
e) PHC & GH	0	*0.0*		0	*0.0*		0	*0.0*	
f) PHC & NGH	0	*0.0*		0	*0.0*		0	*0.0*	
Sub - total	4	*0.4*	7.8	3	*1.3*	5.9	44	*6.5*	86.3
6. **Other combinations (mostly 3 or more facilities)**	8	*0.7*	29.6	4	*1.7*	14.8	15	*2.3*	55.6
7. **Not stated**	5	*0.5*		0	*0.0*		8	*1.2*	
Total	**1,098**			**236**	***13.4***	**688**			
Total contribution (alone or in combination) by									
a) PMP	674	*61.7*	57.0	143	*60.6*	12.1	365	*53.7*	30.9
b) PHC	12	*1.1*	NC	4	*1.7*	NC	1	*0.1*	NC
c) GH	251	*23.0*	51.6	55	*23.2*	11.3	180	*26.5*	37.0
d) NGH	55	*5.0*	31.4	18	*7.6*	10.3	102	*15.0*	58.3

Note : For explanation of % (1) and % (2) see footnotes under table 10.

both levels, for each duration of symptoms. The relevant figures for the decreasing use of the primary level were : 62.3% for duration less than eight days, 60.8% for 8-28 days and 47.4% for 29+ days in urban areas compared to 79.2%, 76.5% and 63.5% respectively in rural areas (Table 10). The relevant figures for increased use of secondary level facilities were : 27.5% for duration less than eight days, 29.5% for 8-28 days and 36.9% for 29+ days in urban areas compared to 8.6%, 12.7% and 15.2% respectively in rural areas (Table 10). The two peaks among those who took no action or action without medical consultation or consulted any one facility (viz., PMP, GH or NGH) were also observed in urban areas. The total contribution by PMP, GH and NGH, either alone or in combination with others, showed the same pattern of two peaks and a through in urban areas also.

2.8. Action taken by the Sick (CS HHs)

2.81 ***Additional Data on Action taken by SPs in CS HHs***: Only very little information on the health facilities visited has been collected from all sick HHs because of limitations in time. In order to get more detailed picture, some additional questions were asked from CS HHs about the health facilities visited when someone was sick (not only CS) during the last six months. These details are discussed in the next few paragraphs :

2.8.2 ***Particulars of PMP*** : **In the CS HHs, 45.2% in rural areas and 68.3% in urban areas had visited a PMP when someone had any symptoms.** Questions regarding whether the PMP was a registered practitioner, the basis of registration and the system of medicine actually practiced could not generally be answered by the respondents. While 67.6% of the HHs answered that the PMP visited was a practitioner registered on the basis of his educational qualification and was practising allopathy, the remaining 32.4% did not know any of these details.

2.8.3 ***Distance travelled for contacting PMP*** : Out of the rural CS HHs consulting PMP, 36.6% travelled 1-5 Kms, followed by 21.1% each travelling 6-10 km, and 16-20 km, and 7.0% travelling 11-15 km. Only 1.4% travelled less than 1 km. In sharp contrast, 25.9% in urban areas travelled less than 1 km, followed by 66.7% travelling 1-5 km, showing the easy approach to PMP for HHs in urban areas. **The average distance travelled to contact PMP was 12.8 km in rural areas compared to 4.0 km in urban areas**. This question was answered by 100% of the respondents in rural areas and 96.4% in urban areas.

2.8.4 ***Reason for not contacting PMP*** : In rural areas, 69.1% had visited a health institution (HI) – 53.6% because it was nearby and 14.3% because of good treatment there. About one-fifth did not take any action. In the urban areas, the no action group was larger and formed 32.1% of those who did not consult a PMP. Consulting a HI was the reason given by 53.5% - 21.4% because it was nearby and 32.1% because of good treatment at the HI. The non-response rate was quite low-5.6% rural and 3.4% urban.

2.8.5 ***Visits to PMP and HI*** : When asked whether they had visited a health institution (HI) when someone was sick during the last six months, 56.5% of the CS HHs in rural areas said they had – 21.1% visiting PMP also. The corresponding figures for urban areas were 37.3% and 21.7% respectively. While there was no difference between rural and urban areas for the percentage of HHs visiting both PMP and HI, those visiting only HI was 35.4% in rural areas compared to 15.6% only in urban areas. The non-response rate was negligible - 2.5% (rural) and 1.2% (urban).

2.8.6 ***Preference among HIs*** : Among the HIs visited by the rural sample, PHC came first (47.2%) followed by government hospital (GH) (9.9%), sanatorium (6.6%) and non-government hospital (NGH) (5.5%). Those visiting both PHC and GH formed 17.6%. In urban areas, 48.4% contacted

GH, 16.1% sanatorium, 12.9% NGH and 6.5% each dual visits to either GH and NGH or GH and sanatorium.

2.8.7 ***Facilities in HI*** : Asked about the facilities available in the HI visited, 56.0% said it was not at all good and 13.2% not so good, in rural areas. Only 26.4% stated that it was good compared to 80.6% of CS HHs in urban areas. The non-response rate for this question was 4.4% (rural) and 9.7% (urban).

2.8.8 ***Distance travelled for visiting HIs*** : In rural areas, 66.7% travelled 1-5 km to reach the nearest HI, followed by 18.9% travelling 6-10 km, 6.7% travelling 41-70 km. In urban areas, 60.7% travelled 1-5 km followed by 14.3% travelling 6-10 km and 10.7% each travelling less than 1 km and 41.70 km. The proportion of CS HHs who travelled less than 6 km to reach the HI was almost equal in rural and urban areas (67.8% and 71.4% respectively) and showed that rural and urban HHs had almost equally easy access to HIs, even though a larger proportion (10.7%) from urban areas travelled less than 1 km compared to rural areas (1.1%). However, this was compensated by a slightly larger proportion travelling long distances of 41-70 km in urban areas (10.7%) compared to rural areas (6.7%). Consequently, **the average distance travelled did not differ much - 12.7 km (rural) and 11.0 km (urban)**. Non – response rate for this question was negligible – 0.6% (rural) and 3.6% (urban).

2.8.9 ***Nearest HI visited*** : The vast majority (98.9% rural and 90.3% urban) stated that the nearest HI visited dispensed medicines only partly. In rural areas, 73.6% travelled by bus and the remaining 26.4% walked to the HI (sometimes long distances). The proportion who walked to the HI was higher in urban areas (41.4%). While 31.0% went by bus, 24.1% travelled by lorry or van.

2.8.10 ***Other HIs visited*** : Information was collected for all HIs visited by the CS HHs when someone was sick during the last six months so that a comparison could be made between the nearest, second nearest and farthest. But only 22 CS HHs in rural areas and six CS HHs in urban areas have visited atleast one more HI. Detailed information for these HIs are not presented because of the small numbers. However, the situation in these HIs appears to be the same with regard to diagnostic facilities being not good and medicines being only partly disburssed. Further, long distance had to be travelled for such often unsatisfactory services. This could explain why a second HI was visited only by a small proportion of the HHs.

2.8.11 ***Satisfaction with Services*** : Satisfaction with the services provided by the HI visited was less among rural CS HHs (36.0%) compared to urban CS HHs (57.1%). The reason for not being satisfied was "treatment not good" for 96.5% of those not satisfied in rural areas and for 100% in urban areas. The non-response rate was nil for most of these questions and negligible for the others, in both rural and urban areas.

2.9 Prevalence of Chest Symptomatics

2.9.1 ***Prevalence in sample villages and wards*** : Prevalence rate for CS in the sample villages of Hanagodu PHC, which had small populations ranging from 156 to 751, varied from 1.5% to 5.1% with an overall rate of 2.2%. The highest prevalence of 5.1% was found in the smallest of these villages with a population of 156. The sample villages of Bannithalapura PHC were comparatively bigger villages with population ranging from 767 to 2,643. Among these, the prevalence rate varied from 0.7% to 1.5%, with an overall rate of 1.1% which was exactly half of that in Hanagodu PHC. While the smallest of these villages had the smallest prevalence rate of 0.7%, that for the others varied from 1.1% to 1.5%. The five sample wards of Mysore city had prevalence rate varying from 0.3% to 0.9% with an overall rate of 0.7%. The prevalence rate in Chamarajanagar town was 0.9%, with variation from 0.4% to 1.5% among the five sample wards.

2.9.2 ***Response to Questions*** : Out of the total CS, 3.0% in rural areas and 8.1% in urban areas could not be interviewed. (No proxy interviews were allowed for CS). Detailed information has been collected for the remaining 164 (97.0%) rural CS and 79 (91.9%) urban CS. However, there was some non-response for each question because a few CS did not state specific answer for it. This was either nil or negligible.

2.9.3 ***Age-sex Prevalence rates*** : In all, 255 chest symptomatics (CS) were identified – 169 in rural areas and 86 in urban areas. Of these, females formed 36.5% (34.3% in rural areas and 40.7% in urban areas). The prevalence rate per 1,000 population for CS in different age-sex groups in rural and urban areas is shown in Table 12. **The prevalence rate steadily increased with age among males and females in rural and urban areas**. The only exceptions were a slight drop in rate for rural females of age 55-64 and urban females of age 25-34 compared to the preceeding age group. The overall prevalence rate was lower among females (10.1) compared to males (18.0). The prevalence rate for females was about half the male prevalence rate in rural areas and about two-thirds in urban areas. This lower prevalence was observed for all age groups except 15-24 in urban areas. Similarly, the overall prevalence rate was higher in rural areas compared to urban areas for all age groups, the overall rates being 16.6 (rural) and 8.2 (urban).

2.9.4 ***Prevalence rate by type of family, religion and caste, education status and occupation :*** Table 13 shows the prevalence rates in different population groups. Joint families had the highest prevalence rate and extended families the least, in both rural and urban areas. Families with 7-9 members had the highest prevalence rate in rural areas followed by those with 1-3 members, 4-6 members and 10 or more members. The last group with least prevalence rate is likely to include most of the extended families. In urban areas also prevalence rate was lowest in families of size 10 or more (5.4 per 1,000) but highest in family size 1-3

Table 12

Prevalence rate for CS in age – sex and rural / urban groups (Mysore District)

Area	Sex	Age group						
		15 – 24	25 – 34	35 – 44	45 – 54	55 – 64	65+	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Rural	F: No.	4	10	14	13	7	10	58
	PR (‰)	*4.0*	*11.6*	*21.1*	*28.8*	*27.3*	*38.0*	*11.5*
	M: No.	6	13	22	25	22	23	111
	PR(‰)	*5.8*	*17.5*	*32.0*	*50.1*	*78.6*	*100.4*	*21.7*
	T: No.	10	23	36	38	29	33	169
	PR(‰)	*4.9*	*14.3*	*26.6*	*40.0*	*54.1*	*67.1*	*16.6*
Urban	F: No.	6	3	9	7	4	6	35
	PR (‰)	*5.4*	*3.1*	*13.6*	*16.1*	*15.5*	*26.7*	*6.8*
	M: No.	3	7	16	10	7	8	51
	PR(‰)	*2.7*	*7.6*	*20.8*	*22.3*	*24.4*	*40.6*	*9.5*
	T: No.	9	10	25	17	11	14	86
	PR(‰)	*4.1*	*5.3*	*17.5*	*19.2*	*20.2*	*33.2*	*8.2*
Rural + Urban (Weighted rates)	*F: PR (‰)*	*4.4*	*9.0*	*18.8*	*25.0*	*23.8*	*34.6*	*10.1*
	M:PR(‰)	*4.9*	*14.5*	*28.6*	*41.8*	*62.3*	*82.5*	*18.0*
	T:PR(‰)	*4.7*	*11.6*	*23.9*	*33.8*	*43.9*	*56.9*	*14.1*

F - Females M - Males T - Total (both sexes)

Table 13

Prevalence rate (PR) per 1000 for CS in some other population groups (Mysore District)

Population group	Rural			Urban			Ovrall PR (weighted)
	Population	CS		Population	CS		
		No.	‰		No.	‰	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. **Type of family**							
Nuclear	4,226	63	*149*	5,210	39	*7.5*	12.7
Joint	5,324	101	*19.0*	3,711	41	*11.0*	16.6
Extended	601	5	*8.3*	1,574	6	*3.8*	7.0
2. **Family size**							
1 – 3	814	15	*18.4*	1,107	12	*10.8*	16.1
4 – 6	5,835	92	*15.8*	5,704	44	*7.7*	13.4
7 – 9	2,041	47	*23.0*	2,002	21	*10.5*	19.2
10 +	1,461	15	*10.3*	1,682	9	*5.4*	8.8
3. **Religion & caste**							
SC/ST	2,873	51	*17.8*	2,406	18	*7.5*	14.7
BCs	6,051	104	*17.2*	5,704	50	*8.8*	14.7
Other Hindus	1,196	12	*10.0*	1,307	10	*7.7*	9.3
Muslims	27	2	*NC*	847	6	*7.1*	NC
4. **Education level**							
Illiterate	5,127	143	*27.9*	3,072	47	*15.3*	24.1
Below SSC	3,071	21	*6.8*	3,876	20	*5.2*	6.3
SSC +	682	5	*7.3*	2,428	19	*7.8*	7.5
5. **Occupation**							
Unemployed	404	26	*64.4*	640	14	*21.9*	51.7
Students (age 15+)	1,737	2	*1.1*	2,237	4	*1.8*	1.3
Housewives	2,331	42	*18.0*	2,441	20	*8.2*	15.1
Employed in :							
a. Agriculture in allied work	3,513	78	22.2	548	4	7.3	17.7
b. Business & allied HH industry	123	4	*NC*	1,244	15	*12.1*	NC
c. Skilled labour	167	5	*NC*	1,012	13	*12.8*	NC
d. Unskilled labour	111	6	*NC*	659	12	*18.2*	NC

NC – Not calculated because of small population (less than 500)

Note – In cols (2) and (5) population of all ages have been used except for population group 5 (Occupation

and 7-9 (about 11 per 1,000 each) with family size 4-6 in between (7.7 per 1,000). Whereas **SC/ST and BCs had almost equal prevalence rate, other Hindus had lower rate, in both rural and urban areas. Illiterates had much higher prevalence rates (three times or more)** compared to even those with only limited education below SSC (i.e. literates with no schooling and those who studied upto Standards I to IX only), in both rural and urban areas. Even among illiterates, the prevalence rate was higher in rural areas (27.9) compared to urban areas (15.3) – almost double. **Unemployed persons had the highest prevalence rates, with those in rural areas** having a rate almost three times higher in rural areas (64.4) compared to urban areas (21.9) as against being double in the overall rate (16.6 and 8.2 respectively given in Table 12). Among the larger occupation groups in rural areas, the second highest prevalence rate was observed for those engaged in agriculture and allied work (22.2) followed by housewives (18.0). Among the urban occupation groups with more than 500 persons in the study sample, unskilled labour had the second highest prevalence rate (18.2) after the unemployed (21.9). This was followed by those engaged in skilled labour and business and allied HH industry (12.8 and 12.1 respectively) and housewives and those engaged in agriculture and allied work 8.2 and 7.3 respectively. Among those engaged in agriculture and allied work, the prevalence rate in rural areas (22.2) was more than three times higher compared to those in urban areas (7.3). Among housewives, the rural rate was more than double of the urban rate (like the overall rate). The prevalence rate for other occupation groups also showed some distinct differences which, however, were based on small populations.

2.9.5 ***Age – Sex distribution of CS*** : The age-sex distribution of the CS is shown in Table 14. The prevalence of CS in the last three age groups was more in rural areas as compared to urban areas. Thus, the proportion of CS of age 45 or more was higher in rural areas (59.2%) compared to urban areas (48.9%). This was compensated by larger percentages in 15-

Table 14

Percentage distribution of chest symptomatics males / females in rural and urban areas (Mysore district)

Area	Age group	Females		Males		Both sexes	
		No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rural	15 – 24	4	*6.9*	6	*5.4*	10	*5.9*
	25 – 34	10	*17.2*	13	*11.7*	23	*13.6*
	35 – 44	14	*24.1*	22	*19.8*	36	*21.3*
	45 – 54	13	*22.4*	25	*22.5*	38	*22.5*
	55 – 64	7	*12.1*	22	*19.8*	29	*17.2*
	65+	10	*17.2*	23	*20.7*	33	*19.5*
	Total	**58**		**111**		**169**	
Urban	15 – 24	6	*17.1*	3	*5.9*	9	*10.4*
	25 – 34	3	*8.6*	7	*13.7*	10	*11.6*
	35 – 44	9	*25.7*	16	*31.4*	25	*29.1*
	45 – 54	7	*20.0*	10	*19.6*	17	*19.8*
	55 – 64	4	*11.4*	7	*13.7*	11	*12.8*
	65+	6	*17.1*	8	*15.7*	14	*16.3*
	Total	**35**		**51**		**86**	
Rural + Urban (weighted percentages)	15 - 24		*10.0*		*5.6*		*7.2*
	25 - 34		*14.6*		*12.3*		*13.0*
	35 - 44		*24.6*		*23.3*		*23.6*
	45 - 54		*21.7*		*21.6*		*21.7*
	55 – 64		*11.9*		*18.0*		*15.9*
	65+		*17.2*		*19.2*		*18.5*

24 and 35-44 age groups in urban areas. The percentage contributions by different age groups shown in Table 14 indicate two peaks. Whereas the second peak seems to be uniformly at age 65 or more, the location of the first peak was at age 35-44 for females and urban males but at age 45-54 for rural males. The average age of the CS was 49.0 (rural) and 46.2 (urban).

2.10 Symptoms during the reference period

2.10.1 ***Frequency of additional symptoms*** : A study of the symptoms present during the reference period of the study showed that **14.6% only of rural CS and 21.5% of urban CS had no symptom other than cough**. At the other extreme, those who had fever, chest pain, loss of weight and night sweat in addition to productive cough formed 7.3% in rural areas and 10.1% in urban areas. Differences between males and females were very little. The most common second symptom was chest pain – 75.0% (rural) and 65.8% (urban). Next came fever with 36.0% of rural and 50.6% of urban CS having this additional symptom. Only 16.5% in rural areas and 12.7% in urban areas had haemoptysis. This proportion was higher among rural males (18.7%) compared to rural females (12.3%). The latter did not differ from the proportion of male and female CS having haemoptysis in urban areas. Those having fever as an additional symptom were more among males compared to females in both rural and urban areas. The relevant figures were 38.3% Vs 31.6% (rural) and 55.3% Vs 43.8% (urban). But, fewer urban males had chest pain (61.7%) compared to urban females (71.9%).

2.10.2 ***Duration of Cough***: Table 15 shows the duration of cough among CS by age and sex. **Cough of duration more than one year (53+ weeks) was reported by 31.1% in rural areas and 29.1% in urban areas**. This proportion was slightly higher among males as compared to females in rural areas. In rural areas, two peaks are distinct, the first for 14-26 weeks (3-6 months) and the other for 53+ weeks (more than one year). This is so

Table 15

Duration of cough among CS by age and sex in rural and urban areas (Mysore district).

Area	Sex / age	Total No.	Duration in weeks									
			1 – 13		14 – 26		27 – 39		40 – 52		53+	
			No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Rural	F	57	7	*12.2*	20	*35.1*	4	*7.0*	11	*19.2*	15	*26.3*
	M	107	18	*16.8*	35	*32.7*	4	*3.7*	14	*13.4*	36	*33.6*
	T	164	25	*15.2*	55	*33.5*	8	*4.9*	25	*15.2*	51	*31.1*
	15 – 34	31	5	*16.1*	9	*29.0*	2	*6.5*	4	*12.9*	11	*35.5*
	35 – 54	73	12	*16.4*	28	*38.4*	3	*4.1*	9	*12.3*	21	*28.8*
	55+	60	8	*13.3*	18	*30.0*	3	*5.0*	12	*20.0*	19	*31.7*
Urban	F	32	12	*37.5*	5	*15.6*	2	*6.2*	4	*12.5*	9	*28.1*
	M	47	9	*19.1*	13	*27.6*	4	*8.5*	7	*14.9*	14	*29.8*
	T	79	21	*26.6*	18	*22.8*	6	*7.6*	11	*13.9*	23	*29.1*
	15 – 34	18	8	*44.4*	2	*11.1*	2	*11.1*	2	*11.1*	4	*22.2*
	35 – 54	40	10	*25.0*	9	*22.5*	4	*10.0*	6	*15.0*	11	*27.5*
	55+	21	3	*14.3*	7	*33.3*	0	*0.0*	3	*14.3*	8	*38.1*

F - Females M - Males T - Total (both sexes)

for males and females as well as for the three age groups, all the five groups having 29.0% to 38.4% for duration 14-26 weeks and 26.3% to 35.5% for duration of 53+ weeks. The same trend is seen in urban areas for males and 55+ age group only. For females and for age groups 15-34 and 35-54, the first peak came earlier (1-13 weeks).

2.10.3 ***Average duration of cough*** : The average duration of cough was 33.4 weeks for females and 32.9 weeks for males, in rural areas. The corresponding figures for urban areas were 29.2 and 32.6 weeks respectively. Thus, the average duration of cough was less among urban females compared to the other three groups. The average duration of cough in rural areas varied from 31.5 to 34.7 weeks for the three age groups. In urban areas, the average duration of cough steadily increased with age from 26.6 weeks for 15-34 to 31-4 weeks for 35-54 and to 34.7 weeks for 55+age group.

2.10.4 ***Occurrence of Chest Pain, by Age :*** **Percentage of CS having chest pain decreased steadily with increase in age in both rural and urban areas**. The relevant figures were 87.1% for 15-34, 75.3% for 35-54 and 66.7% for 55+ age groups in rural areas and 83.3%, 67.5% and 47.6% respectively in urban areas, the latter showing a faster decline. Percentage having chest pain did not differ between rural females (75.4) and males (76.6), but was higher among urban females (71.9) compared to males (61.7), the latter being the least among these four percentages.

2.10.5 ***CS without Chest Pain*** : The proportion of CS with no chest pain was higher among urban CS (34.2) compared to that among rural CS (23.8%). The percentage of CS without chest pain was not only higher in urban areas but also showed a faster increase with age. While this percentage did not differ between rural females (24.6%) and males (23.4%), that in urban areas was higher among males (38.3%) compared to females (28.1%).

2.10.6 ***Duration of Chest pain***: Duration of chest pain among CS by age and sex for rural and urban areas is shown in Table 16. The pattern closely resembles that for duration of cough. Two peaks, one at 14-26 weeks and the other at 53+ weeks is the common pattern. The only exceptions are : (1) for CS of age 55+ in rural areas the second peak comes earlier at 40-52 weeks and (2) for females and those of age 15-34 in urban areas the first peak comes at 1-13 weeks. Chest pain of duration more than one year was reported by 20.7% in rural areas and 13.9% in urban areas. This proportion was higher among males compared to females, particularly in rural areas.

2.10.7 ***Average duration of Chest pain***: The average duration of chest pain was less in urban areas, the reduction being from 23.4 weeks to 17.4 weeks among females and from 24.6 weeks to 18.0 weeks among males. There was no difference between females and males among rural and urban CS. The average duration of chest pain for rural CS showed a steady decline with increase in age from 29.8 weeks in age group 15-34 to 24.6 weeks in 35-54 and to 20.8 weeks in 55+. There was no such trend for urban CS with the average duration varying from 17.5 to 18.3 weeks.

2.10.8 ***Occurrence of Fever by Age:*** As in the case of chest pain, percentage of CS having fever decreased steadily with increase in age in both rural and urban areas. The relevant figures were : 54.8% for 15-34, 39.7% for 35-54 and 21.7% for 55+ age groups in rural areas and 77.8%, 47.5% and 33.3% respectively in urban areas, the latter again showing a faster decline as for chest pain.

2.10.9 ***CS without Fever:*** Among the CS, 63.4% in rural areas and 49.4% in urban areas did not have fever as an additional symptom. The lower figure for urban areas compared to rural is in striking contrast to those not having chest pain which was higher in urban areas (refer para 2.10.5). This proportion was higher In females compared to males, the corresponding

Table 16

Duration of chest pain among CS by age and sex in rural and urban areas (Mysore district)

Area	Sex / age	Total No.	Duration in weeks									
			1 – 13		14 – 26		27 – 39		40 – 52		53+	
			No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Rural	F	57	7	*12.3*	14	*24.6*	6	*10.5*	7	*12.3*	9	*15.8*
	M	107	13	*12.1*	31	*29.0*	1	*0.9*	12	*11.2*	25	*23.4*
	T	164	20	*12.2*	45	*27.4*	7	*4.3*	19	*11.6*	34	*20.7*
	15 – 34	31	5	*16.1*	8	*25.8*	2	*6.5*	4	*12.9*	9	*29.0*
	35 – 54	73	11	*15.1*	19	*26.0*	4	*5.5*	5	*6.8*	18	*24.7*
	55+	60	4	*6.7*	18	*30.0*	1	*1.7*	10	*16.7*	7	*11.7*
Urban	F	32	9	*28.1*	6	*18.8*	3	*9.4*	1	*3.1*	4	*12.5*
	M	47	6	*12.8*	12	*25.5*	0	*0.0*	4	*8.5*	7	*13.9*
	T	79	15	*19.0*	18	*22.8*	3	*3.8*	5	*6.3*	11	*13.9*
	15 – 34	18	7	*38.9*	3	*16.7*	2	*11.1*	2	*11.1*	1	*5.6*
	35 – 54	40	8	*20.0*	11	*27.5*	0	*0.0*	3	*7.5*	5	*12.5*
	55+	21	0	*0.0*	4	*19.0*	1	*4.8*	0	*0.0*	5	*23.8*

figures being 68.4% and 60.7% respectively in rural areas and 56.2% and 44.7% respectively in urban areas. This higher figure among females is also in sharp contrast to the lower duration for chest pain among urban females (refer para 2.10.5). As in the case of chest pain, consequent to the decreasing trend for CS with fever (para 2.10.8), the proportion of CS without fever steadily increased with age in both rural and urban areas. The corresponding figures are : 45.2% in 15-34, 58.9% in 35-54 and 78.3% in 55+ in rural areas and 22.2%, 52.5% and 66.7% respectively in urban areas. As for chest pain, the increase in the proportion not having fever was steeper in urban areas.

2.10.10 ***Duration of Fever***. Duration of fever by age and sex in rural and urban areas is shown in Table 17. The two peaks observed for durations of cough and chest pain are not that prominent in the case of fever. The proportion having fever for more than one year was 12.2% in rural areas and 7.6% in urban areas. This percentage was higher among males in both rural and urban areas.

2.10.11 ***Average duration of Fever***. **The average duration of fever was less among females as compared to males in both rural and urban areas**. The corresponding figures are : 9.4 weeks and 13.8 weeks respectively in rural areas and 10.4 weeks and 15.3 weeks respectively in urban areas. Among rural CS, the highest duration of fever (18.3 weeks) was observed for age 15-24 and lowest (7.2 weeks) for age 65+. There was a general decrease in duration with increase in age except for age 45-54 which showed a slight increase compared to the earlier age group. There was no such trend in urban areas. The highest duration was reported by age group 25-34 and lowest by 55-64.

2.10.12 ***Occurrence of Haemoptysis***: Additional symptom of haemoptysis was not reported by 83.3% of urban CS. This proportion was less in males (81.3%) compared to females (87.7%), in rural areas. The proportion of

Table 17

Duration of fever among CS by age and sex in rural and urban areas (Mysore district)

Area	Sex / age	Total No.	Duration in weeks									
			1 – 13		14 – 26		27 – 39		40 – 52		53+	
			No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Rural	F	57	3	*5.3*	6	*10.5*	3	*5.3*	3	*5.3*	3	*5.3*
	M	107	9	*8.4*	8	*7.5*	2	*1.9*	6	*5.6*	17	*15.9*
	T	164	12	*7.3*	14	*8.5*	5	*3.0*	9	*5.4*	20	*12.2*
	15 – 34	31	4	*12.9*	4	*12.9*	4	*12.9*	1	*3.2*	4	*12.9*
	35 – 54	73	7	*9.6*	8	*11.0*	0	*0.0*	4	*5.5*	11	*15.1*
	55+	60	1	*1.7*	2	*3.3*	1	*1.7*	4	6.7	5	8.3
Urban	F	32	5	*18.8*	2	*6.2*	2	*6.2*	3	*9.4*	1	*3.1*
	M	47	8	*17.0*	7	*14.9*	1	*2.1*	5	*10.6*	5	*10.6*
	T	79	14	*17.7*	9	*11.4*	3	*3.8*	8	*10.1*	6	*7.6*
	15 – 34	18	7	*38.9*	3	*16.7*	1	*5.5*	3	*16.7*	0	*0.0*
	35 – 54	40	4	*10.0*	5	*12.5*	2	*5.0*	4	*10.0*	4	*10.0*
	55+	21	3	14.3	1	4.8	0	0.0	1	4.8	2	9.5

CS without haemoptysis was highest in age group 55+ in rural areas (90.0%) and in age group 15-34 in urban areas (94.4%). It was least in 35-54 age group in both areas. Among those having haemoptysis, three times or more was most common, about 70% among both females and males in rural areas. Among urban CS, this proportion was less among females (50.0%) compared to males (83.3%). But these percentages are based on very small number of CS with haemoptysis (4 to 6 except for rural males with 20). Analysis by age is not presented because of small numbers.

2.10.13 ***Occurrence and duration of loss of weight***: Loss of weight was not reported by 59.1% of rural CS and 55.7% of urban CS. Differences between males and females were small in both areas. In rural areas, the proportion of CS without loss of weight was least (52.1%) in age group 35-54 and highest (66.7%) in 55+ age group. In urban areas, it was least (50.0%) in age group 15-34. Among the rural CS who had reported loss of weight, the duration was 14-26 weeks for 40.9% of females and 35.6% of males. Next in frequency was 1-13 weeks and 53+ weeks for females (18.2% each) and 1-13 weeks for males (24.4%) followed by 53+ weeks (20.0%). The pattern was similar among urban CS with a peak duration of 14-26 weeks followed by 1-13 weeks and 53+ weeks with almost equal frequencies. Those having loss of weight even in the combined age groups were too small in numbers to study the duration pattern among different age groups in rural and urban areas.

2.10.14 ***Average duration for loss of weight :*** This was somewhat smaller for rural females (10.7 weeks) compared to urban females (13.4 weeks). In rural areas, the biggest average duration for loss of weight (14.4 weeks) was observed for age group 45-54 and least for age group 65+ (6.3 weeks). In contrast, in urban areas, age group 55-64 had the highest average duration for weight loss (17.7 weeks) and 15-24 age group the least (5.3 weeks).

2.10.15 ***Occurrence and duration of Night Sweat :*** Night sweat was not reported by 70.7% in rural areas and 60.8% in urban areas. The differences between males and females were small in both areas. Among the rural CS having night sweat, the duration with the highest frequency was 14-26 weeks for both males (41.2%) and females (32.3%). Next in frequency was 1-13 weeks for females and 53+ weeks for males (about 35% for each). Among urban CS, 30.8% each had duration of 1-13 weeks and 53+ weeks, for females. Among the urban males, the highest frequency was for 1-13 weeks (38.9%) followed by 22.2% each for 14-26 weeks and 40-52 weeks. The numbers with night sweat were too small even in the combined age groups for studying the duration pattern for different age groups in rural and urban areas.

2.11 Initial Symptoms

2.11.1 In rural areas, cough alone was the most common initial symptom (31.1%) followed by cough and chest pain (28.7%), cough, chest pain and fever (9.8%) and cough and fever (7.9%). In urban areas also cough alone was the most common initial symptom (39.2%) but was followed by cough, chest pain and fever (15.2%), cough and chest pain (13.9%) and cough and fever (11.4%).

2.12 Actions taken by CS

2.12.1 ***Number of Actions :*** Out of 164 rural CS interviewed, one could not give a satisfactory answer for the number of actions taken. Of the remaining 163 CS, 28 (17.2%) did not take any action, 44 (27.0%) took one action, 45 (27.6%) took two actions, 32 (19.6%) took three actions, 11 (6.7%) took four actions and one (0.6%) each took five, six and seven actions. Among the 79 urban CS interviewed, 12 (15.2%) did not take any action, 27 (34.2%) took one action, 21 (26.6%) took two actions, 13 (16.5%) took three actions, 5 (6.3%) took four actions and one (1.3%) took six actions.

2.12.2 ***Influencing factors considered***: The possible influence of some factors on the number of actions taken is studied in the following paragraphs. The intention was to study the possible influence of some other factors also like education levels of the CS and his/her HOH. But the vast majority of the CS and their HOH were illiterate, leaving small numbers only under "below SSC" and "SSC+". This was particularly so in urban areas which had fewer CS. Because of the small number of CS taking more than four actions, these have been clubbed with four actions to form a combined group of four or more actions. While interpreting the percentages and averages given for the urban areas, it has to be remembered that most of these are based on small number of CS. This also applied to some of the percentages and averages given for rural also.

2.12.3 ***Influence of duration of cough***: Table 18 indicates the influence of duration of cough on the number of actions taken by rural and urban CS. **The average number of actions taken increases steadily with increase in the duration of cough in rural areas**. The same appears to be the case among urban CS also. The proportion not taking any action among rural CS showed a steady decrease with increase in the duration of cough. Among the CS with duration of 3-13 weeks, the largest percentage took one action (48.0%). Among the CS with the three larger durations, the largest proportion took two actions. It appears that the third action may not be influenced so much by the duration of cough. But, the percentage taking four or more actions increased steadily with increase in the duration of cough in rural areas.

2.12.4 ***Influence of duration of Chest pain***: The average number of actions taken by CS with different durations of chest pain did not show any trend in rural and urban areas (Table 19). Among the rural CS, the percentage not taking any action decreased steadily with increase in the duration of chest pain but at a slower rate than for duration of cough. Out of the CS without chest pain (duration 0 weeks) equal proportions took one, two or

Table 18

Influence of duration of cough on the number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentage of CS with different durations of cough taking each no. of action							
	Rural				Urban			
	3 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53 + weeks	3 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53 + weeks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0	32.0	20.0	21.1	4.0	14.3	5.6	17.6	21.7
1	48.0	23.6	21.2	24.0	66.7	33.3	23.5	13.0
2	16.0	30.9	27.3	30.0	19.0	38.9	29.4	21.7
3	4.0	23.6	18.2	24.0	0.0	22.2	29.4	17.4
4+	0.0	1.8	12.1	18.0	0.0	0.0	0.0	26.1
No. of CS	**25**	**55**	**33**	**50**	**21**	**18**	**17**	**23**
Mean no. of actions	***0.9***	***1.6***	***1.8***	***2.4***	***1.0***	***1.8***	***1.7***	***2.2***

Table 19

Influence of duration of chest pain on the number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentages of CS with different durations of chest pain taking each no. of action									
	Rural					Urban				
	0 weeks	1 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53+ weeks	0 weeks	1 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53+ weeks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
0	26.3	25.0	20.0	11.5	2.9	18.5	20.0	0.0	12.5	27.3
1	23.7	50.0	22.2	26.9	23.5	44.4	46.7	33.3	12.5	9.1
2	23.7	10.0	37.8	26.9	29.4	18.5	33.3	33.3	37.5	18.2
3	23.7	15.0	17.8	19.2	20.6	7.4	0.0	33.3	25.0	27.3
4+	2.6	0.0	2.2	15.4	23.5	11.1	0.0	0.0	12.5	18.2
No of CS	**38**	**20**	**45**	**26**	**34**	**27**	**15**	**18**	**8**	**11**
Mean no. of actions	***1.5***	***1.2***	***1.6***	***2.0***	***2.5***	***1.6***	***1.1***	***2.0***	***2.1***	***2.0***

Note : Some of these percentages, particularly urban, are based on small numbers.

three actions. As in the case of duration of cough, the largest percentage of CS with chest pain for 1-13 weeks took one action (50.0%). For all the CS with the three larger durations, the largest percentage took two actions. However, the same percentage of CS with chest pain for 27-52 weeks (26.9%) took one and two actions. Proportion of CS taking three and four or more actions steadily increased with increase in the duration of chest pain. There was no clear pattern among urban CS except for a steady decrease in those taking one action with increase in duration of chest pain.

2.12.5 ***Comparison of Influence of cough and chest pain***: A comparison of Tables 18 and 19 shows that among those with duration upto 13 weeks, only 4% with this duration of cough had taken three or more actions compared to 15% with the same duration for chest pain. Thus, it appears that **for the same duration of symptoms the presence of chest pain leads to more action than presence of cough**. But when the duration is prolonged to 14-26 weeks, the position is reversed with a larger proportion of CS with cough of duration of 14-26 weeks taking three or more actions (25.4%) compared to 20.0% of CS with chest pain of that duration taking three or more actions.

2.12.6 ***Influence of Age :*** Among the rural CS, the **percentage not taking any action increased with increase in age** (Table 20). This percentage among CS of age 55+ (21.7%) was more than double of that among CS of age 15-34 (9.7%). The situation seems to be the same among urban CS also. While two actions were most frequent among rural CS of age 15-34 and 55+, one action was most frequent among CS of age 35-54. One action was most frequent among urban CS of all the three age groups (28.6% to 38.9%). About one-third of the rural and urban CS of age 15-34 took two actions. The average number of actions taken was higher among CS of age 15-34 compared to those of the two higher age groups in rural areas. This seems to be the case in urban areas also, but

Table 20

Influence of age on the number of actions taken by rural urban CS (Mysore district)

Action No.	Percentage of CS different age groups taking each no. of action					
	Rural			Urban		
	15 – 34 yrs	35 – 54 yrs	55 + yrs	15 – 34 yrs	35 – 54 yrs	55+ yrs
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	9.7	16.4	21.7	11.1	10.0	28.6
1	16.1	37.0	20.0	38.9	35.0	28.6
2	35.5	19.2	33.3	33.3	27.5	19.0
3	19.4	20.5	18.3	5.6	25.0	9.5
4+	19.4	6.8	5.0	11.1	2.5	14.3
No. of CS	**31**	**73**	**60**	**18**	**40**	**21**
Mean no. of actions	***2.4***	***1.7***	***1.8***	***1.8***	***1.8***	***1.5***

Table 21

Influence of sex on the number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentage of male and female CS taking each no. of action			
	Rural		Urban	
	Female	Male	Female	Male
(1)	(2)	(3)	(4)	(5)
0	12.3	19.6	15.6	14.9
1	26.3	27.1	40.6	29.8
2	33.3	24.3	21.9	29.8
3	21.1	18.7	9.4	21.3
4+	7.0	10.3	12.5	4.3
No. of CS	**57**	**107**	**32**	**47**
Mean no. of actions	***1.8***	***1.8***	***1.7***	***1.7***

the picture is not clear due to small number of CS. Thus, **age of the CS appears to influence both "not taking action" and number of actions taken**.

2.12.7 ***Influence of Sex :*** Table 21 studies the influence of sex of the CS on the number of actions taken. **There is hardly any difference in the average number of actions taken by males and females in both rural and urban areas**. Among the rural CS, the proportion not taking action was smaller for females (12.3%) compared to males (19.6%). The largest frequency among rural females was for two actions (33.3%) followed by one action (26.3%). This relative position was reversed for males with 27.1% taking one action and 24.3% taking two actions. Among urban CS, equal proportions of males and females (about 15%) did not take any action. The largest frequency was observed for one action followed by two actions, among males and females.

2.12.8 ***Influence of type of Family:*** The pattern for number of actions taken (including no action) did not differ much between CS belonging to nuclear and joint families in both urban and rural areas, except that among rural CS, largest percentage among nuclear families took one action followed by two actions but their relative positions were reversed among joint families (Table 22). The average number of actions taken also did not differ between the two types of families in both rural and urban areas. The number of CS in extended families was too small for any worthwhile comparison.

2.12.9 ***Influence of Occupation :*** The percentage not taking action was least among housewives and highest among the unemployed and students, in both rural and urban areas (Table 23). Among housewives and unemployed and students, two actions were more common in rural areas followed by one action. But, employed CS showed the opposite pattern with more of them taking one action. Among urban CS, one action was

Table 22

Influence of type of family on number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentage of CS in different types of families taking each no. of action			
	Rural		Urban	
	Nuclear	Joint	Nuclear	Joint
(1)	(2)	(3)	(4)	(5)
0	14.8	16.3	13.2	19.4
1	31.1	25.5	34.2	38.9
2	23.0	29.6	23.7	19.4
3	21.3	19.4	21.1	13.9
4+	8.2	9.2	7.9	8.3
No. of CS	**61**	**98**	**38**	**36**
Mean no. of actions	***1.8***	***1.8***	***1.8***	***1.5***

Note : Extended families are not included in this table because of small numbers.

Table 23

Influence of occupation on the number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentage of CS in different occupation groups taking each no. of action					
	Rural			Urban		
	Unemployed and students	Housewives	Employed	Unemployed and students	Housewives	Employed
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	21.4	9.5	19.1	33.3	5.0	13.6
1	21.4	28.6	27.7	26.7	45.0	31.8
2	35.7	33.3	22.3	26.7	15.0	31.8
3	14.3	19.0	21.3	13.3	15.0	18.2
4+	7.1	9.5	9.6	0.0	20.0	4.5
No. of CS	**28**	**42**	**94**	**15**	**20**	**44**
Mean no. of actions	***1.7***	***1.9***	***1.8***	***1.2***	***2.1***	***1.7***

the most common for all the three occupation groups. The percentage taking one action was also more in each of these three groups compared to that among rural CS. The average number of actions taken did not differ much among the three groups in rural areas. It was highest among urban housewives (2.1) followed by employed (1.7) and unemployed and students (1.2).

2.12.10 ***Influence of highest level of Education in HH :*** The influence of the highest level of education in HH is studied in Table 24. The **percentage not taking action was least among rural CS living in HHs with the highest education level of SSC or more** (6.7%) compared to 17.9% for those in HHs with only illiterates and 22.0% for CS living in HHs with the highest level of education below SSC. The pattern was almost similar among urban CS with the highest percentage (26.7%) for the illiterate group and almost equal proportions for the other two groups (12.0% and 12.8%). The maximum frequency was observed for one action in the first two groups of rural CS (28.6% and 25.3%) and for two actions for the last group with higher level of education (37.8%). The pattern was similar among urban CS, but with a much larger proportion (60.0%) taking one action among illiterate CS. The average number of actions taken was 2.1 for CS living in rural HHs with the highest level of education of SSC or more and 1.7 to 1.9 for other two groups. The average number of actions taken by the urban CS increased with increase in the highest level of education in the HH – from 0.9 to 1.7 to 2.0.

2.12.11 ***Influence of religion and caste :*** Average number of actions taken was highest for Other Hindus and lowest for SC/ST with BCs in between, for both rural and urban CS. (Table 25). But the differences were small varying from 1.5 to 1.9 except for Other Hindus among rural CS (2.8). One action was most common for all the six groups shown in the Table except for SC/ST (rural) with highest frequency for two actions. No action by rural CS was most common among SC/ST (28.0%) followed by BCs

Table 24

Influence of the highest education level in the HH on the number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentage of CS in different highest education levels in HH taking each no. of action					
	Rural			Urban		
	Illiterate	Below SSC	SSC+	Illiterates	Below SSC	SSC+
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	17.9	22.0	6.7	26.7	12.0	12.8
1	28.6	25.3	28.9	60.0	40.0	20.5
2	21.4	24.2	37.8	6.7	24.0	35.9
3	14.3	20.9	20.6	6.7	16.0	20.5
4+	17.9	7.7	6.7	0.0	8.0	10.3
No. of CS	**28**	**91**	**45**	**15**	**25**	**39**
Mean no. of actions	***1.9***	***1.7***	***2.1***	***0.9***	***1.7***	***2.0***

Note : Percentages in col 5 are based on small numbers.

Table 25

Influence of Religion and Caste on the number of actions taken by rural and urban CS (Mysore District)

No. of Actions	Percentage of CS in different religion and caste groups taking different no. of actions					
	Rural			Urban		
	SC/ST	BCs	Other Hindus	SC/ST	BCs	Other Hindus
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	28.0	13.0	8.3	5.6	19.6	10.0
1	22.0	29.0	16.7	44.4	28.3	40.0
2	32.0	27.0	16.7	38.9	26.1	10.0
3	12.0	20.0	50.0	5.6	19.6	30.0
4+	6.0	11.0	8.3	5.6	6.5	10.0
No. of CS	**50**	**100**	**12**	**18**	**46**	**10**
Mean no. of actions	***1.5***	***1.9***	***2.8***	***1.6***	***1.7***	***1.9***

(13.0%) and Other Hindus (8.3%). Among urban CS, no action was most common among BCs (19.6%) and least common among SC/ST (5.6%) with Other Hindus in between (10.0%).

2.12.12 ***Influence of Family size :*** Among rural CS, proportion not taking action steadily increased with family size from 14.3% for size 1-3 to 23.4% for size 7-9 but fell steeply to 7.1% for size 10+ (Table 26). This proportion was highest (33.3%) among urban CS for size 1-3 and nil for size 10+ (based on only 7 CS). Among rural CS, for those of size 1-3 and 10+ three actions were most common followed by one action. Of the other two, one action was most common for size 4-6 and two actions for size 7-9. Among urban CS, one action was most common for all sizes except 10+. Average number of actions by rural CS varied from 1.7 for size 7-9 to 2.2 for size 1-3. Range for urban CS was from 1.4 for size 7-9 to 1.9 each for sizes 4-6 and 10+.

2.13 <u>Details for each action</u>

2.13.1 ***Symptoms present at the time of each action :*** The distribution of CS by symptoms present at the time of each action is shown in Table 27. The **proportion having cough with haemoptysis increased steadily with number of actions in both rural and urban areas**. The relevant figures were : 10.4%, 13.2% and 15.2% for actions one, two and three respectively in rural areas and 4.5%, 20.0% and 31.6% respectively in urban areas which showed a much steeper increase. Among the five groups without haemoptysis, the order of frequency for first action among rural CS was cough and one more symptom (41.5%), cough alone (27.4%), cough and two more symptoms (16.3%). For second and third action, cough and two more symptoms became more frequent than cough alone. Among urban CS taking first action, cough alone (37.3%) was most frequent followed by cough and one more symptom (26.9%), cough and two more symptoms (20.9%). These three groups followed a similar pattern for all the three actions. While cough and one more symptom was

Table 26

Influence of Family size on the number of actions taken by rural and urban CS (Mysore District)

No. of Actions	Percentage of CS in different family size taking difference no. of actions							
	Rural				Urban			
	1-3	4-6	7-9	10+	1-3	4-6	7-9	10+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0	14.3	15.7	23.4	7.1	33.3	12.2	15.8	0.0
1	21.4	31.5	19.1	28.6	33.3	29.3	47.4	28.6
2	14.3	25.8	36.2	21.4	16.7	26.8	21.1	57.1
3	28.6	19.1	10.6	42.9	8.3	22.0	10.5	14.3
4+	21.4	7.8	10.6	0.0	8.3	9.7	5.3	0.0
No. of CS	**14**	**89**	**47**	**14**	**12**	**41**	**19**	**7**
Mean no. of actions	***2.2***	***1.8***	***1.7***	***2.0***	***1.2***	***1.9***	***1.4***	***1.9***

Table 27

Distribution of CS by symptoms present at each action (Mysore district)

Symptoms	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. **Cough with haemoptysis (with or without other symptoms)**	14	*10.4*	12	*13.2*	7	*15.2*	3	*4.5*	8	*20.0*	6	*31.6*
2. Without haemoptysis and with												
a) Cough alone	37	*27.4*	16	*17.6*	6	*13.0*	25	*37.3*	11	*27.5*	4	*21.1*
b) Cough & 1 more symptom	56	*41.5*	27	*29.7*	14	*30.4*	18	*26.9*	8	*20.0*	2	*10.5*
c) Cough & 2 more symptoms	22	*16.3*	19	*20.9*	9	*19.6*	14	*20.9*	4	*10.0*	1	*5.3*
d) Cough & 3 more symptoms	4	*3.0*	11	*12.1*	5	*10.9*	4	*6.0*	5	*12.5*	3	*15.8*
e) Cough & 4 more symptoms	2	*1.5*	6	*6.6*	5	*10.9*	3	*4.5*	4	*10.0*	3	*15.8*
Total	**135**		**91**		**46**		**67**		**40**		**19**	

most common symptom present at the time of each action by rural CS, cough alone was most common at the time of each action by urban CS. Further, a larger percentage of those taking each action had cough alone among urban CS compared to rural CS. These indicate that a substantial proportion of urban CS take action before other symptoms develop or additional symptoms develop later on (more slowly) among urban CS. For the other two groups, the frequencies (though small) steadily increased with number of actions in both rural and urban areas except for a drop for cough and three more symptoms for third action. While the trend showed only a slow increase among rural CS, it was steeper among urban CS. Even so, the maximum frequency for these two groups was only 15.8%.

2.13.2 ***Interval between onset of symptoms and first action :*** The first action was taken by 43.0% of rural CS and 41.8% of urban CS after an interval of 1-7 days from the onset of symptoms (Table 28). **It is significant that 15.5% of rural CS and 4.5% of urban CS had acted only after 30 days. The proportion who took the first action within 15 days was 71.9% (rural) and 85.1% (urban).** The average interval from onset of symptoms to first action was 42 days for rural CS and 94 days for urban CS. This may at least partly be due to the average interval being affected to a larger extent by extreme values in urban areas compared to rural areas. Yet, it is surprising that, **despite the availability of health facilities within easy reach, more urban CS had delayed their first action**.

2.13.3 ***Interval between onset of symptoms and second action :*** The second action was taken by 29.7% of rural CS within 5-30 days, 25.3% within 31-60 days and 25.3% after a long interval of more than 210 days. The corresponding figures for urban CS were 30.0%, 17.5% and 22.5% respectively. The second action was taken by about 72% of the CS in both areas by 150 days. The average interval between onset of symptoms and second action was almost the same in rural (182 days) and urban (186 days) areas. Yet, only a smaller proportion (47.5%) had taken the second

Table 28

Interval between onset of symptoms and different actions (Mysore district).

Action No.	Interval for action (days)	Rural: No. of CS taking this action	Rural: Percent of CS	Rural: Cum percent of CS	Rural: Mean interval (days)	Urban: No. of CS taking this action	Urban: Percent of CS	Urban: Cum percent of CS	Urban: Mean interval (days)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	1 – 7	**135**	*43.0*		***42***	**67**	*41.8*		***94***
	8 – 15		*28.9*	71.9			*43.3*	85.1	
	16 – 30		*12.6*	84.5			*10.4*	95.5	
	31+		*15.5*	100.0			*4.5*	100.0	
2	1 – 30	**91**	*29.7*		***182***	**40**	*30.0*		***186***
	31 – 60		*25.3*	55.0			*17.5*	47.5	
	61 – 90		*9.9*	64.9			*12.5*	60.0	
	91 – 150		*7.7*	72.6			*12.5*	72.5	
	151 – 210		*2.2*	74.8			*5.0*	77.5	
	211+		*25.3*	100.1			*22.5*	100.0	
3	1 – 60	**46**	*21.7*		***308***	**19**	*21.0*		***327***
	61 – 90		17.4	39.1			*5.3*	26.3	
	91 – 150		17.4	56.5			*10.5*	36.8	
	151 – 210		2.2	58.7			*15.8*	52.6	
	211 – 270		4.3	63.0			*10.5*	63.1	
	271 – 360		8.7	71.7			*0.0*	63.1	
	361+		28.3	100.0			36.9	100.0	

action within 60 days in urban areas as compared to 55.0% of rural CS, indicating some delay in taking second action by urban CS. **It is significant that about 30% of rural and urban CS had taken even the second action within 30 days and 55.0% (rural) and 47.5% (urban) within 60 days.**

2.13.4 ***Interval between onset of symptoms and third action :*** On the average, **the third action was taken after 308 days by rural CS and 327 days by urban CS**. While about 21% of rural and urban CS had taken even the third action within 60 days, only 26.3% of urban CS had taken the third action within 90 days compared to 39.1% of rural CS. Further, a larger proportion of urban CS took more than 360 days for third action (36.9%) compared to rural CS (29.3%). Within 150 days from onset of symptoms, only 36.8% of urban CS had taken the third action compared to 56.5% of rural CS. These indicate more delay in taking the third action also by urban CS. It is surprising that even with facilities available within easy reach, all actions have been delayed in the case of urban CS.

2.13.5 ***Type of Health facilities visited for First Action :*** **In rural areas, 80.0% of the first action was visits to primary level health facilities** (44.4% to PMP and 35.6% to PHC) (Table 29). Since there was no PHC or equivalent in urban areas, the primary level visits were confined to PMP (71.6%). This reduction in visits to primary level facilities in urban areas was more than compensated by more frequent use of secondary level general health facilities – 25.4% (urban) compared to 19.3% (rural). About 80% of this secondary level use was of Government hospitals (GH) and 20% non-government hospitals (NGH), in both rural and urban areas. First action by visiting specialised facilities was nil for sanatorium and DTC by both rural and urban CS, except for one urban CS visiting sanatorium.

Table 29

Distribution of CS by type of health facility contacted for each action (Mysore district)

Health facility	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
PMP	60	*44.4*	44	*48.4*	18	*39.1*	48	*71.6*	20	*50.0*	6	*31.6*
PHC	48	*35.6*	13	*14.3*	9	*19.6*	0	*0.0*	1	*2.5*	0	*0.0*
GH	21	*15.6*	20	*22.0*	6	*13.0*	14	*20.9*	6	*15.0*	4	*21.1*
NGH	5	*3.7*	5	*5.5*	5	*10.9*	3	*4.5*	5	*12.5*	2	*10.5*
DTC	0	*0.0*	1	*1.1*	0	*0.0*	0	*0.0*	1	*2.5*	0	*0.0*
Sanatorium	0	*0.0*	8	*8.8*	8	*17.4*	1	*1.5*	7	*17.5*	7	*36.8*
Others	1	*0.7*	0	*0.0*	0	*0.0*	1	*1.5*	0	*0.0*	0	*0.0*
Total	**135**		**91**		**46**		**67**		**40**		**19**	

Table 30

Distribution of CS by number of visits to each health facility contacted for each action (Mysore district)

No. of visits	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	20	*15.0*	17	*18.7*	13	*28.9*	9	*13.6*	17	*43.6*	4	*21.1*
2	31	*23.3*	26	*28.6*	8	*17.8*	9	*13.6*	7	*17.9*	6	*31.6*
3	11	*8.3*	13	*14.3*	5	*11.1*	14	*21.2*	4	*10.3*	1	*5.3*
4	17	*12.8*	12	*13.2*	5	*11.1*	14	*21.2*	2	*5.1*	1	*5.3*
5 – 7	14	*10.5*	12	*13.2*	8	*17.8*	5	*7.6*	4	*10.3*	5	*26.3*
8+	40	*30.1*	11	*12.1*	6	*13.3*	15	*22.7*	5	*12.8*	2	*10.5*
Total	**133**		**91**		**45**		**66**		**39**		**19**	
NS	1	*1.5*	0	*0.0*	1	*2.2*	1	*1.5*	1	*2.5*	0	*0.0*
Mean no. of visits	***4.5***		***3.5***		***3.6***		***4.8***		***3.1***		***3.6***	

2.13.6 ***Type of Health facilities visited for second action :*** **For the second acition, the use of primary level facilities was less but still quite high – 62.7% (rural) and 52.5% (urban). The rural CS made much more use of PMP (48.4%) compared to PHC (14.3%).** In both areas, 27.5% made use of secondary level facilities for the second action, showing an increased use by rural CS (from 19.3% for first action). While the share of GH was the same (80%) in rural areas, it was reduced to 54.5% in urban areas, showing an increased use of NGH for second action. Use of specialised facilities for second action rose from 0.0% to 9.9% among rural CS (8.8% to sanatorium and 1.1% to DTC). The rise was steeper among urban CS from 1.4% to 20.0% (17.5% to sanatorium and 2.5% to DTC).

2.13.7 ***Type of Health facilities visited for Third Action*** : **The use of primary level facilities for third action was unexpectedly very high (58.7%) among rural CS** (39.1% to PMP and 19.6% to PHC) and still high among urban CS (31.6%). While the use of secondary level general health facilities did increase to 31.6% (from 27.5% for second action) in urban areas, it surprisingly showed a decrease from 27.5% to 23.9% in rural areas. The use of specialised facilities was higher for third action compared to the second action – from 9.9% to 17.4% (rural) and from 20.0% to 36.8% (urban). But this was confined to sanatorium only and DTC was not mentioned at all. In all, only one rural CS and one urban CS had mentioned visit to DTC for all the actions combined. **The continued high use of primary level facilities for second and third actions and the negligible proportion of CS visiting specialised facilities for second and third action shows that the former hardly refers CS to the latter for more appropriate diagnosis and treatment.**

2.13.8 ***Number of visits to each Health Facility :*** For each action, multiple visits were often made. Table 30 gives the distribution of CS by number of visits to a health facility for each action. Among the rural CS, the largest

proportion (30.1%) made eight or more visits for the first action followed by 23.3% making two visits and 15.0% one visit. The pattern was slightly different among urban CS with 22.7% making eight or more visits followed by 21.2% each making three or four visits and 13.6% each one or two visits. The **average number of visits for first action was 4.5 (rural) and 4.8 (urban). Fewer visits were made for the second action** – average of 3.5 (rural) and 3.1 (urban). The pattern in rural and urban areas did not differ much for the second action except for higher proportion making two visits (28.6%) compared to 18.7% for one visit among rural CS and the opposite picture among urban CS with 43.6% making first visit and 17.9% second visit. Though the **average number of visits for the third action was the same among both rural and urban CS (3.6)**, the pattern differed. Among rural CS, 28.9% made only one visit followed by 17.8% each making two and 5-7 visits and 13.3% eight or more visits. Among urban CS, 31.6% made two visits followed by 26.3% with 5-7 visits and 21.1% with one visit. Among rural CS, the percentage making only one visit increased with increase in the number of actions. A similar increasing trend was observed among urban CS for two visits and 5-7 visits. But a decreasing trend was observed for three visits and eight or more visits. Altogether, 1,197 visits were made by 135 rural CS who had taken action giving an average of 8.9 total visits per CS. Corresponding figures for urban CS were 588 visits by 67 CS giving an average of 8.8 total visits per CS.

2.13.9 ***Distance travelled for First Action :*** Table 31 shows the distribution of CS by distance travelled for taking each action. For the first action, 53.7% of the rural CS travelled only 1-5 km followed by 20.9% travelling 6-10 km. Since health facilities were not present in most of the villages, only 2.2% travelled less than 1 km. With health facilities within easy reach, 22.4% of the urban CS travelled less than 1 km and 71.6% travelled 1-5 km. The **average distance travelled for taking first action was 9.9 km for rural CS and 4.3 km for urban CS**.

Table 31

Distribution of CS by distance travelled for each action (Mysore district)

Distance (Km)	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<1	3	*2.2*	0	*0.0*	1	*2.2*	15	*22.4*	3	*7.5*	2	*10.5*
1 – 5	72	*53.7*	21	*23.1*	12	*28.3*	48	*71.6*	19	*47.5*	8	*42.1*
6 – 10	28	*20.9*	16	*17.6*	9	*19.6*	0	*0.0*	5	*12.5*	4	*21.1*
11 – 15	6	*4.5*	8	*8.8*	1	*2.2*	1	*1.5*	3	*7.5*	2	*10.5*
16 – 20	14	*10.4*	21	*23.1*	5	*10.9*	0	*0.0*	0	*0.0*	0	*0.0*
21 – 40	5	*3.7*	7	*7.7*	2	*4.3*	0	*0.0*	1	*2.5*	0	*0.0*
41 – 70	5	*3.7*	15	*16.5*	8	*17.4*	2	*3.0*	6	*15.0*	2	*10.5*
71+	1	*0.7*	3	*3.3*	7	*15.2*	1	*1.5*	3	*7.5*	1	*5.3*
Total	**134**		**91**		**46**		**67**		**40**		**19**	
NS	1	*0.7*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Mean distance	***9.9***		***22.7***		***27.9***		***4.4***		***19.0***		***14.9***	

2.13.10 ***Distance travelled for second action :*** For the second action, 23.1% each of the rural CS travelled 1-5 km and 16-20 km. Next in frequency was 17.6% travelling 6-10 km and 16.5% travelling 41-70 km. Thus, while 40.7% of rural CS travelled 0-10 km, a slightly bigger percentage of 47.3 travelled 16-70 km for taking second action. In sharp contrast, among urban CS, 67.5% travelled 1-10 km and 17.5% travelled 16-70 km, for taking second action. **The average distance travelled for taking second action was 22.7 km for rural CS and 19.0 km for urban CS**.

2.13.11 ***Distance travelled for Third Action :*** Among rural CS, 50.1% travelled 0-10 km for taking third action, 32.6% travelled 16-70 km and 15.2% more than 70 km. The corresponding figures for urban CS were 73.7%, 10.5% and 5.3% respectively. **The average distance travelled for taking third action also was less for urban CS (14.9 km) compared to rural CS (27.9 km)**. As many as 52.6% of the urban CS travelled only 0-5 km for taking even the third action. Considering all actions together, travelling 1 to 5 km was most common among both rural and urban CS. But, while 38.7% did so among rural CS, 56.4% did so among urban CS. **Average distance travelled for all actions together was 18.2 km for rural CS and 10.9 km for ubran CS**..

2.13.12 ***Mode of Transport :*** Among rural CS, 74.6% went by bus to take their first action and 23.9% walked. The corresponding figures for urban CS were in sharp contrast - 10.3% and 66.2% respectively. Nearly one-fifth used unscheduled transport like van and lorry. Walking to the health facility was much less for the second action for both rural and urban CS, the percentage coming down from 23.9 to 7.7 for rural CS and from 66.2 to 32.5 for urban CS. This led to an increase in the use of bus from 74.6% to 92.3% by rural CS and from 10.3% to 45% by urban CS. The proportion using unscheduled transport was almost the same (17.5%) for urban CS. For the third action, 89.1% of rural CS used bus and the remaining 10.9% walked. Among urban CS, 52.6% went by bus, 36.8%

by foot and 10.5% by unscheduled transport. While travelling by bus was most common for visiting PMP among all actions by rural CS (88.5%), 11.5% had walked. The corresponding percentages for visiting PHC were 54.8% and 42.5% respectively, with a negligible 2.7% using own bicycle. The higher proportion of rural CS who walked to PHC (42.5%) compared to PMP (11.5%) indicates better proximity of PHC. Out of all actions by urban CS, 65.4% walked to PMP. The next common mode of travel was use of van (15.4%) and bus (14.1%). Only for 3.8% of all actions own bicycle was used.

2.14 Single and Multiple Actions to Health Facilities

2.14.1 ***Frequency of Single and Multiple Actions :*** The distribution of rural and urban CS according to single and multiple actions to general health facilities (GHFs) and special health facilities (SHFs) is shown in Table 32. Among the rural CS, 32.6% made single contact with a GHF – 15.6% to PHC, 13.3% to PMP and negligible for GH or NGH and nil to SHF. Single actions were more among urban CS (40.3%) – 29.9% to PMP, 9.0% to GH, nil to NGH and negligible to sanatorium and nil to DTC. Two or more actions to the GHF were made by 18.5% of rural CS and 14.9% of urban CS. While such actions were made to PHC (11.1%) and PMP (7.4%) by rural CS, only PMP had two or more actions by urban CS. Multiple actions to combinations of GHFs only were taken by 31.9% of rural CS and 22.4% of urban CS. Multiple actions to combinations of GHF and SHF were almost entirely confined to GHFs and sanatorium, the rural CS making fewer such contacts (12.6%) compared to urban CS (20.9%). Combinations with DTC were either negligible or nil. Among rural CS, 83.0% had contacted only GHFs compared to 76.1% by urban CS. Those contacting sanatorium or DTC (mostly the former) comprised 14.1% for rural CS and 23.9% for urban CS. The influence of some factors on making single or multiple actions are studied in the following paragraphs.

Table 32

Distribution of rural and urban CS by single and multiple contacts with health facilities (Mysore district)

Contacts with health facilities	Rural		Urban	
	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)
1. **Single contacts with GHF or SHFs**				
a) PMP	18	*13.3*	20	*29.9*
b) PHC	21	*15.6*	0	*0.0*
c) GH	4	*3.0*	6	*9.0*
d) NGH	1	*0.7*	0	*0.0*
e) Sanatorium	0	*0.0*	1	*1.5*
f) DTC	0	*0.0*	0	*0.0*
Sub - total	**44**	***32.6***	**27**	***40.3***
2. **Two or more contacts with same GHFs**				
a) PMP	10	*7.4*	10	*14.9*
b) PHC	15	*11.1*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*
Sub – total	**25**	***18.5***	**10**	***14.9***
3. **Multiple contacts with combinations of GHFs/SHFs**				
a) GHFs only	43	*31.9*	15	*22.4*
b) GHFs and Sanatorium	17	*12.6*	14	*20.9*
c) GHFs and DTC	1	*0.7*	1	*1.5*
d) GHFs, sanatorium and DTC	1	*0.7*	0	*0.0*
Sub – total	**62**	***45.9***	**30**	***44.8***
4. **Other combinations**	4	*3.0*	0	*0.0*
Total	**135**		**67**	
A. Contacting only GHFs	112	*83.0*	51	*76.1*
B. Contacting SHFs sanatorium or DTC	19	*14.1*	16	*23.9*

2.14.2 ***Influence of Age :*** Table 33 studies the influence of age. Among rural CS, single contacts were more common in age group 35-54 (44.3%) and least in age group 15-34 (17.9%). The position was reversed for two or more contacts with GHF - 11.5% in age group 35-54 and 32.1% in age group 15-34. There was not much difference between age groups for single actions among urban CS but decreased steadily with increase in age for two or more actions to GHF. **Multiple contacts with combinations of GHFs only increased with age among rural CS (from 21.4% to 40.4%) and among urban CS** (from 6.2% to 46.7%). On the contrary, multiple contacts with GHFs and sanatorium steadily decreased with age among rural CS (from 25.0% to 4.3%) and among urban CS (from 31.2% to 6.7%). Contacts with sanatorium or DTC (consisting mainly of the former) decreased steadily with age - from 28.6% to 6.4% among rural CS and from 37.5% to 6.7% among urban CS.

2.14.3 ***Influence of Sex :*** Among urban CS, single contacts with GHFs were more frequent among females (48.1%) compared to males (35.0%) (Table 34). The situation appears to be the opposite among rural CS-30.0% among females and 34.9% among males. Similarly, the pattern was just the opposite for two or more contacts with GHFs also – larger percentage for females than for males among rural CS and smaller percentage for females than for males among urban CS. While multiple contacts with combinations of GHFs only were less common among rural females (24.0%) compared to males (36.0%), the position was the opposite for multiple contacts with combinations of GHFs and sanatorium among rural CS - 22.0% for females and 7.0% for males. There was no difference between males and females among urban CS for these two types of actions, the figures varying from 20.0% to 22.5% only.

2.14.4 ***Influence of Type of Family :*** Table 35 shows that single contacts with GHFs among rural CS were more frequent for CS of nuclear families (38.5%) compared to CS of joint families (30.5%). The situation was just

Table 33

Influence of age on single and multiple contacts with health facilities by rural and urban CS (Mysore district.

Visits to health facilities	Rural – age group						Urban – age group					
	15 – 34		35 – 54		55+		15 – 34		35 – 54		55+	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. **Single contact with GHF or SHF's**												
a) PMP	3	*10.7*	10	*16.4*	6	*12.8*	5	*31.2*	10	*27.8*	5	*33.3*
b) PHC	1	*3.6*	14	*23.8*	6	*12.8*	0	*0.0*	0	*0.0*	0	*0.0*
c) GH	1	*3.6*	2	*3.3*	1	*2.1*	1	*6.2*	4	*11.1*	1	*6.7*
d) NGH	0	*0.0*	1	*1.6*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
e) Sanatorium	0	*0.0*	0	*0.0*	0	*0.0*	1	*6.2*	0	*0.0*	0	*0.0*
f) DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**5**	***17.9***	**27**	***44.3***	**13**	***27.7***	**7**	***43.7***	**14**	***38.9***	**6**	***40.0***
2. **Two or more contacts with same GHFs**												
a) PMP	6	*21.4*	3	*4.9*	1	*2.1*	3	*18.8*	6	*16.7*	1	*6.7*
b) PHC	3	*10.7*	4	*6.6*	8	*17.0*	0	*0.0*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**9**	***32.1***	**7**	***11.5***	**9**	***19.1***	**3**	***18.8***	**6**	***16.7***	**1**	***6.7***
3. **Multiple contacts with GHFs /SHFs**												
a) GHFs only	6	*21.4*	18	*29.5*	19	*40.4*	1	*6.2*	7	*19.4*	7	*46.7*
b) GHFs and Sanatorium	7	*25.0*	8	*13.1*	2	*4.3*	5	*31.2*	8	*22.2*	1	*6.7*
c) GHFs and DTC	0	*0.0*	0	*0.0*	1	*2.1*	0	*0.0*	1	*2.8*	0	*0.0*
d) GHFs, sanatorium and DTC	1	*3.6*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**14**	***50.0***	**26**	***42.6***	**22**	***46.8***	**6**	***37.5***	**16**	***44.4***	**8**	***53.3***
4. **Other combinations**	0	*0.0*	1	*1.6*	3	*6.4*	0	*0.0*	0	*0.0*	0	*0.0*
Total	**28**		**61**		**47**		**16**		**36**		**15**	
A. Contacting GHFs only	20	*71.4*	52	*85.2*	41	*87.2*	10	62.5	27	75.0	14	93.3
B. Contacting SHFs (DTC or sanatorium)	8	*28.6*	8	*13.1*	3	*6.4*	6	*37.5*	9	*25.0*	1	*6.7*

Table 34

Influence of sex on single and multiple contacts with health facilities by rural and urban CS (Mysore district).

Contacts with health facilities	Rural				Urban			
	Females		Males		Females		Males	
	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. **Single contact with GHF or SHF's**								
a) PMP	8	*16.0*	11	*12.8*	7	*25.9*	13	*32.5*
b) PHC	5	*10.0*	16	*18.6*	0	*0.0*	0	*0.0*
c) GH	2	*4.0*	2	*2.3*	5	*18.5*	1	*2.5*
d) NGH	0	*0.0*	1	*1.2*	0	*0.0*	0	*0.0*
e) Sanatorium	0	*0.0*	0	*0.0*	1	*3.7*	0	*0.0*
f) DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**15**	***30.0***	**30**	***34.9***	**13**	***48.1***	**14**	***35.0***
2. **Two or more contacts with same GHFs**								
a) PMP	5	*10.0*	5	*5.8*	2	*7.4*	8	*20.0*
b) PHC	7	*14.0*	8	*9.3*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**12**	***24.0***	**13**	***15.1***	**2**	***7.4***	**8**	***20.0***
3. **Multiple contacts with GHFs/SHFs**								
a) GHFs only	12	*24.0*	31	*36.0*	6	*22.2*	9	*22.5*
b) GHFs and Sanatorium	11	*22.0*	6	*7.0*	6	*22.2*	8	*20.0*
c) GHFs and DTC	0	*0.0*	1	*1.2*	0	*0.0*	1	*2.5*
d) GHFs, sanatorium and DTC	0	*0.0*	1	*1.2*	0	*0.0*	0	*0.0*
Sub – total	**23**	***46.0***	**39**	***45.3***	**12**	***44.4***	**18**	***45.0***
4. **Other combinations**	0	*0.0*	4	*4.7*	0	*0.0*	0	*0.0*
Total	**50**		**86**		**27**		**40**	
A. Contacting GHFs only	39	*78.0*	74	*86.0*	20	*74.1*	31	*77.5*
B. Contacting SHFs (DTC or sanatorium)	11	*22.0*	8	*9.3*	7	*25.9*	9	*22.5*

Table 35

Influence of type of family on single and multiple contacts with health facilities by rural and urban CS (Mysore district)

Contacts with health facilities	Rural – type of family				Urban – type of family			
	Nuclear		Joint		Nuclear		Joint	
	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. **Single contact with GHF or SHF's**								
a) PMP	10	*19.2*	9	*11.0*	10	*30.3*	10	*34.5*
b) PHC	7	*13.5*	14	*17.1*	0	*0.0*	0	*0.0*
c) GH	3	*5.8*	1	*1.2*	2	*6.1*	4	*13.8*
d) NGH	0	*0.0*	1	*1.2*	0	*0.0*	0	*0.0*
e) Sanatorium	0	*0.0*	0	*0.0*	1	*3.0*	0	*0.0*
f) DTC	0	*0.0*	0	*0.10*	0	*0.0*	0	*0.0*
Sub – total	**20**	***38.5***	**25**	***30.5***	**13**	***39.4***	**14**	***48.3***
2. **Two or more contacts with same GHFs**								
a) PMP	3	*5.8*	7	*8.5*	6	*18.2*	4	*13.8*
b) PHC	5	*9.6*	9	*11.0*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**8**	***15.4***	**16**	***19.5***	**6**	***18.2***	**4**	***13.8***
3. **Multiple contacts with GHFs /SHFs**								
a) GHFs only	16	*30.8*	26	*31.7*	8	*24.2*	5	*17.2*
b) GHFs and Sanatorium	5	*9.6*	12	*14.6*	6	*18.2*	5	*17.2*
c) GHFs and DTC	0	*0.0*	1	*1.2*	0	*0.0*	1	*3.4*
d) GHFs, sanatorium and DTC	1	*1.9*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**22**	***42.3***	**39**	***47.6***	**14**	***42.4***	**11**	***37.9***
4. **Other combinations**	2	*3.8*	2	*2.4*	0	*0.0*	0	*0.0*
Total	**51**		**82**		**33**		**29**	
A. Contacting GHFs only	44	*84.6*	67	*81.7*	26	*81.8*	23	*79.3*
B. Contacting SHFs (DTC or sanatorium)	6	*11.5*	13	*15.9*	7	*18.2*	6	*20.6*

opposite among urban CS - single actions were less frequent for CS of nuclear families (39.4%) compared to CS of joint families (48.3%). Two or more contacts with GHF also showed a similar opposite picture - the frequency for rural CS of nuclear families being less (15.4%) than for CS of joint families (19.5%) and frequency for urban CS of nuclear families being more (18.2%) than for CS joint families (13.8%). There was no difference between the two types of families for multiple contacts with combinations of GHFs only by rural CS and for multiple contacts with combinations of GHFs and sanatorium by urban CS. While multiple contacts with combinations of GHFs and sanatorium by rural CS appears to be less among CS of nuclear families (9.6%) compared to CS of joint families (14.6%), multiple contacts with combinations of GHFs only by urban CS appear to be more among CS of nuclear families (24.2%) compared to CS of joint families (17.2%).

2.14.5 ***Influence of Family Size :*** The number of CS in families with 1-3 and 10+ persons were quite small in both rural and urban areas (ranging from 7 to 13 only). Hence only two combined groups of family size 1-6 and 7+ are presented in Table 36. Single actions among rural CS were more common in the smaller families (36.8%) than in bigger families (26.5%). Among urban CS, it was less frequent in the smaller families (36.4%) than in bigger families (47.9%). The percentages of rural and urban CS making two or more contacts with GHF did not differ much between smaller and bigger families. Multiple contacts with combinations of GHFs only among rural CS were less common in smaller families (26.4%) than in bigger families (40.8%). Such actions among urban CS were more common in smaller families (29.5%) than In bigger families (8.7%). While the proportions with multiple contacts with combinations of GHFs and sanatorium among rural CS did not differ between smaller and bigger families, it was smaller in smaller families (18.2%) compared to bigger families (26.1%) among urban CS.

Table 36

Influence of family size on single and multiple contacts with health facilities by rural and urban CS (Mysore district)

Contacts with health facilities	Rural – family size				Urban – family size			
	1 – 6		7+		1 – 6		7+	
	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Single contact with GHF or SHF's								
a) PMP	16	*18.4*	3	*6.1*	12	*27.3*	8	*34.8*
b) PHC	13	*14.9*	8	*16.3*	0	*0.0*	0	*0.0*
c) GH	3	*3.4*	1	*2.0*	3	*6.8*	3	*13.0*
d) NGH	0	*0.0*	1	*2.0*	0	*0.0*	0	*0.0*
e) Sanatorium	0	*0.0*	0	*0.0*	1	*2.3*	0	*0.0*
f) DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**32**	***36.8***	**13**	***26.5***	**16**	***36.4***	**11**	***47.9***
2. Two or more contact with same GHFs								
a) PMP	6	*6.9*	4	*8.2*	7	*15.9*	3	*13.0*
b) PHC	11	*12.6*	4	*8.2*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**17**	***19.5***	**8**	***16.3***	**7**	***15.9***	**3**	***13.0***
3. Multiple contacts with GHFs / SHFs								
a) GHFs only	23	*26.4*	20	*40.8*	13	*29.5*	2	*8.7*
b) GHFs and Sanatorium	10	*11.5*	7	*14.3*	8	*18.2*	6	*26.1*
c) GHFs and DTC	0	*0.0*	1	*2.0*	0	*0.0*	1	*4.3*
d) GHFs, sanatorium and DTC	1	*1.1*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**34**	***39.1***	**28**	***57.1***	**21**	***47.7***	**9**	***39.1***
4. Other combinations	4	*4.6*	0	*0.0*	0	*0.0*	0	*0.0*
Total	**87**		**49**		**44**		**23**	
A. Contacting GHFs only	72	*83.8*	41	*83.7*	35	*79.5*	16	*69.6*
B. Contacting SHFs (DTC or sanatorium)	11	*12.6*	8	*16.3*	9	*20.5*	7	*30.4*

2.14.6 ***Influence of Religion and Caste :*** Table 37 studies the influence of religion and caste. Religion and caste groups other than SC/ST and BCs have not been included in the Table because of small numbers of CS. While the percentage making single contacts with GHFs by rural CS did not differ much between SC/ST and BCs, that by urban CS was higher among SC/ST (47.1%) compared to BCs (35.1%). Two or more contacts with GHF by rural CS were more frequent among SC/ST (30.6%) than among BCs (14.9%) but less common among urban SC/ST (11.8%) than urban BCs (18.9%). Multiple contacts with combinations of GHFs only and combinations of GHFs and sanatorium both showed smaller frequencies among SC/ST compared to BCs for both rural and urban CS.

2.14.7 ***Influence of Occupation :*** Among rural CS, the percentage making single contacts with GHFs or SHFs was highest among the employed (35.5%) and lowest among unemployed and students (27.3%) with housewives in between (31.6%) (Table 38). But this proportion was smaller among urban CS for the employed (36.8%) and higher among housewives (47.4%). The percentage of rural CS making two or more contacts with GHF was highest among unemployed and students (31.8%) and lowest among the employed (13.2%) with housewives in between (21.1%). This proportion among urban CS was lower for housewives (5.3%) and higher for the employed (21.1%). The highest frequency for multiple visits to combinations of GHFs only by rural CS was among the employed (34.2%) and lowest among housewives (26.3%) with unemployed and students in between (31.8%). But, multiple visits to combinations of GHFs and sanatorium by rural CS was highest among housewives (21.1%) and lowest among unemployed and students (4.5%) with the employed in between (10.5%). Among urban CS, housewives have slightly higher frequency than employed for both combinations of GHFs only and GHFs and sanatorium. Thus, there are a number of differences between urban and rural C.S.

Table 37

Influence of major castes on single and multiple contacts with health facilities by rural and urban CS (Mysore district).

Contacts with health facilities	Rural – major castes				Urban – major casts			
	SC/ST		BCs		SC/ST		BCs	
	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. **Single contact with GHF or SHF's**								
a) PMP	3	*8.3*	13	*14.9*	5	*29.4*	10	*27.0*
b) PHC	7	*19.4*	13	*14.9*	0	*0.0*	0	*0.0*
c) GH	1	*2.8*	2	*2.3*	3	*17.6*	2	*5.4*
d) NGH	0	*0.0*	1	*1.1*	0	*0.0*	0	*0.0*
e) Sanatorium	0	*0.0*	0	*0.0*	0	*0.0*	1	*2.7*
f) DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**11**	***30.6***	**29**	***33.3***	**8**	***47.1***	**13**	***35.1***
2. **Two or more contacts with same GHFs**								
a) PMP	3	*8.3*	6	*6.9*	2	*11.8*	7	*18.9*
b) PHC	8	*22.2*	7	*8.0*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**11**	***30.6***	**13**	***14.9***	**2**	***11.8***	**7**	***18.9***
3. **Multiple contacts with GHFs/SHFs**								
a) GHFs only	8	*22.2*	29	*33.3*	2	*11.8*	7	*18.9*
b) GHFs and Sanatorium	4	*11.1*	12	*13.8*	5	*29.4*	9	*24.3*
c) GHFs and DTC	1	*2.8*	0	*0.0*	0	*0.0*	1	*2.7*
d) GHFs, sanatorium and DTC	0	*0.0*	1	*1.1*	0	*0.0*	0	*0.0*
Sub - total	**13**	***36.1***	**42**	***48.3***	**7**	***41.2***	**17**	***45.9***
4. **Other combinations**	1	*2.8*	3	*3.4*	0	*0.0*	0	*0.0*
Total	**36**		**87**		**17**		**37**	
A. Contacting GHFs only	30	*83.3*	71	*81.6*	12	*70.6*	26	*70.3*
B. Contacting SHFs (DTC or sanatorium)	5	*13.9*	13	*14.9*	5	*29.4*	11	*29.7*

Table 38

Influence of occupation on single and multiple contacts with health facilities by rural and urban CS (Mysore district)

Contacts with health facilities	Rural						Urban			
	Unemployed & students		Housewives		Employed		Housewives		Employed	
	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Single contact with GHF or SHF's										
PMP	3	*13.6*	6	*15.8*	10	*13.2*	5	*26.3*	11	*28.9*
b) PHC	3	*13.6*	4	*10.5*	14	*18.4*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	2	*5.3*	2	*2.6*	4	*21.1*	2	*5.3*
d) NGH	0	*0.0*	0	*0.0*	1	*1.3*	0	*0.0*	0	*0.0*
e) Sanatorium	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	1	*2.6*
f) DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**6**	***27.3***	**12**	***31.6***	**27**	***35.5***	**9**	***47.4***	**14**	***36.8***
2. Two or more contacts with same GHFs										
a) PMP	2	*9.1*	3	*7.9*	5	*6.6*	1	*5.3*	8	*21.1*
b) PHC	5	*22.7*	5	*13.2*	5	*6.6*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**7**	***31.8***	**8**	***21.1***	**10**	***13.2***	**1**	***5.3***	**8**	***21.1***
3. Multiple contacts with GHFs /SHFs										
a) GHFs only	7	*31.8*	10	*26.3*	26	*34.2*	4	*21.1*	6	*15.8*
b) GHFs and Sanatorium	1	*4.5*	8	*21.1*	8	*10.5*	5	*26.3*	9	*23.7*
c) GHFs and DTC	1	*4.5*	0	*0.0*	0	*0.0*	0	*0.0*	1	*2.6*
d) GHFs, sanatorium & DTC	0	*0.0*	0	*0.0*	1	*1.3*	0	*0.0*	0	*0.0*
Sub - total	**9**	***40.9***	**18**	***47.4***	**35**	***46.1***	**9**	***47.4***	**16**	***42.1***
4. Other combinations	0	*0.0*	0	*0.0*	4	*5.3*	0	*0.0*	0	*0.0*
Total	**22**		**38**		**76**		**19**		**38**	
A. Contacting GHFs only	20	*90.9*	30	*78.9*	63	*82.9*	14	*73.7*	27	*71.1*
B. Contacting SHFs (DTC or sanatorium)	2	*9.1*	8	*21.1*	9	*11.8*	5	*26.3*	11	*28.9*

Note : There were only 10 CS among unemployed and students in urban areas. Hence this group is omitted from this Table.

2.14.8 ***Influence of Highest Education Level in HH:*** Table 39 shows that among rural CS, single contacts with PMP and PHC did not differ between the three education groups. Eventhough single contacts with GH were more frequent in the illiterate group (8.7%) compared to the other two groups (1.4% and 2.4%), the overall percentages for single contacts did not differ much between the three education groups. Multiple contacts with PMP did not differ much between the three education groups. While multiple contacts with PMP and with combination of GHFs and sanatorium were most common in the illiterate group, those with PHC and with combinations of GHFs only were most common in the illiterate group. As a result of these opposing patterns, the overall percentages for multiple contacts with same GHFs and with combinations of GHFs and SHFs did not differ much between the three education groups. **Among urban CS, single contacts with GHFs decreased steadily with increase in education level** from 81.8% in the illiterate group to 45.5% in the below SSC group and to 23.5% in the SSC+ group. The **same decreasing trend was much more pronounced for single contacts with GH** and only 2.9% in the SSC+ group made single contacts with GH. SSC+ group had higher percentages than below SSC group for multiple contacts with same GHFs and with combinations of GHFs only. But these percentages did not differ much between these two groups for multiple contacts with GHFs and sanatorium (22.7 and 26.5).

2.15 <u>Diagnostic Examinations</u>

2.15.1 ***Sputum Examination during each Action :*** **Sputum examination was ordered for only 16.2% of rural CS and 19.4% of urban CS during first action** (Col.4 of Table 40). For 91.7% of rural CS for whom it was ordered, it was done at the same facility (25.0% on the same day and 66.7% on another day, requiring an additional visit) (not given in the Table). The remaining 8.3% had sputum examination at another facility on another day after an additional visit. For 71.4% of urban CS for whom it was ordered it was done at the same facility —7.1% on the same day and 64.3% at the

Table 39

Influence of highest educational level in the family on single and multiple contacts to health facilities by rural and urban CS (Mysore district)

	Rural-highest educational level in HH						Urban-highest educational level in HH					
	III		Below SSC		SSC+		III		Below SSC		SSC+	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Single contact With GHFs or SHFs												
a) PMP	3	13.0	10	14.1	6	14.3	4	36.4	9	41.0	7	20.6
b) PHC	3	13.0	11	15.5	7	16.7	0		0		0	
c) GH	2	8.7	1	1.4	1	2.4	4	36.4	1	4.5	1	2.9
d) NGH	0		1	1.4	0		0		0		0	
e) Sanatorium	0		0		0		1	9.1	0		0	
f) DTC	0		0		0		0		0		0	
Sub-total	**8**	**34.8**	**23**	**32.4**	**14**	**33.3**	**9**	**81.8**	**10**	**45.5**	**8**	**23.5**
2. Two or more contact with GHF												
a) PMP	3	13.0	4	5.6	3	7.1	0		3	13.6	7	20.6
b) PHC	2	8.7	7	9.9	6	14.3	0		0		0	
c) GH												
d) NGH												
Sub-total	**5**	**21.7**	**11**	**15.5**	**9**	**21.4**	**0**	**0.0**	**3**	**13.6**	**7**	**20.6**
3. Multiple contacts with combinations of												
a) GHFs only	3	13.0	24	33.8	16	38.1	2	18.2	3	13.6	10	29.4
b) GHFs and Sanatorium	6	26.1	9	12.7	2	4.8	0		5	22.7	9	26.5
c) GHF & DTC	0		0		1	2.4	0		1	4.5	0	
d) GHFs, DTC and Sanatorium	1	4.3	0		0		0		0		0	
Sub-total	**10**	**43.5**	**33**	**46.5**	**19**	**45.2**	**2**	**18.2**	**9**	**40.9**	**19**	**55.9**
4. Other combinations	0	0.0	4	5.6	0	0.0	0	0.0	0	0.0	0	0.0
Total	**23**		**71**		**42**		**11**		**22**		**34**	
A. Contacting GHFs Only	16	69.6	62	87.3	39	92.9	10	90.9	16	72.7	25	73.5
B. Contacting DTC and Sanatorium	7	30.4	9	12.7	3	7.1	1	9.1	6	27.3	9	26.5

Table 40

Details of Sputum Examination by Rural and Urban CS (Mysore District)

Sputum Examination During / by	No. of CS/Actions	Ordered		Examined		Results Told		Positive		
		No.	% of Col.2	No.	% of Col.3	No.	% of Col.5	No.	% of Col.5	% of Col.7
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11
Rural										
During										
Action 1	135	12	*16.2*	12	*100.0*	7	*58.3*	4	*33.3*	*NC*
Action 2	91	33	*36.3*	33	*100.0*	20	*60.6*	8	*24.2*	*40.0*
Action 3	46	15	*32.6*	15	*100.0*	7	*46.7*	4	*26.7*	*NC*
By PMP	131	21	*16.0*	21	*100.0*	14	*66.7*	6	*28.6*	*42.9*
PHC	73	1	*1.4*	1	*NC*	1	*NC*	1	*NC*	*NC*
GH	47	19	*40.4*	19	*100.0*	7	*36.8*	3	*15.8*	*NC*
NGH	16	5	*31.2*	5	*NC*	3	*NC*	0	*NC*	*NC*
DTC	2	2	*NC*	2	*NC*	2	*NC*	1	*NC*	*NC*
Sanatorium	20	18	*90.0*	17	*94.4*	11	*64.7*	8	*47.1*	*72.7*
Urban										
During										
Action 1	67	13	*19.4*	13	*100.0*	7	*53.8*	5	*38.5*	*NC*
Action 2	40	19	*47.5*	19	*100.0*	15	*78.9*	9	*47.4*	*60.0*
Action 3	19	12	*63.2*	12	*100.0*	6	*50.0*	3	*25.0*	*NC*
By										
PMP	78	15	*19.2*	14	*93.3*	7	*50.0*	4	*25.0*	*NC*
PHC	2	0	*NC*	NA	*NA*	NA	*NA*	NA	*NA*	*NA*
GH	25	10	*40.0*	10	*100.0*	5	*50.0*	3	*30.0*	*NC*
NGH	12	6	*50.0*	6	*NC*	5	*NC*	1	*NC*	*NC*
DTC	1	1	*NC*	1	*NC*	0	*NC*	0	*NC*	*NC*
Sanatorium	16	16	*100.0*	16	*100.0*	13	*81.3*	10	*62.5*	*76.9*

NA – Not Applicable
NC – Not calculated because of very small numbers

same facility on another day – and for 28.6% at another facility on another day. Thus, 92.9% had to make additional visit. Ordering of sputum examination for rural CS showed only some improvement for second and third actions, the figures being 36.3% and 32.6% respectively. The situation was better but still not satisfactory for urban CS with sputum being ordered for 47.5% for second action and for 63.2% for third action. Further, out of those for whom sputum examination has been ordered about 90.0% was done in the same facility for both second and third actions in both areas (not given in the Table). But, a large proportion of them (varying from 46.7% to 75%) had to make another visit to get it done. **The fact that about 90% of the sputum examinations ordered were done in the same facility shows that most of the health facilities without laboratory facilities for sputum examination did not order sputum examination.**

2.15.2 ***Sputum Examination at different Health Facilities :*** Out of the total of 292 actions taken by rural CS, 131 (44.1%) were for consulting PMP. **Only in 16% of these, the PMP asked the CS to get their sputum examined** (Col.4 of Table 40). **Out of the 73 consultations with PHC, only for a negligible proportion (1.4%) sputum was ordered eventhough this was a requirement under NTP for all CS**. The situation was better but still much short of expectations during consultations with GH (40.4%) and NGH (31.2%) ordering sputum examination. Further, the number of such actions was very small (16.1% and 5.5% respectively). During 22 actions taken to consult DTC/sanatorium, sputum examination was ordered for 90.9%. **Even these specialised institutions did not order sputum examination for all CS**. The situation was slightly better for urban CS with sputum being ordered by 19.2% (PMP), 40.0% (GH) and 50.0% (NGH). The relevant number of actions (the denominators) were 78, 25 and 12 out of the total 140 actions. All CS were ordered sputum examination by DTC / sanatorium.

2.15.3 ***Information about results of sputum examination at each action:* Out of those who had sputum examination during the first action, 41.7% of rural CS and 46.2% of urban CS were not informed about result of sputum examination** (Table 40 gives the complimentary figures). Those who were not told about the result during second action formed 39.4% among rural CS and 21.1% among urban CS and showed some improvement compared to first action. However, the position deteriorated during third action with 53.3% (rural) and 50.0% (urban) not being informed about the result.

2.15.4 ***Information about result of sputum examination at health facilities:*** Among rural CS, out of the actions leading to sputum examination, results were told to CS for 66.7% by PMP, 1 out of 1 by PHC, 36.8% by GH, 3 out of 5 by NGH and 68.4% by DTC/sanatorium (Col.8 of Table 40). The corresponding figures for urban CS were : 50.0% each by PMP and GH, 5 out of 6 by NGH and 76.5% by DTC/ sanatorium,. These show considerable laxity on the part of these health facilities in informing CS about results of sputum examination.

2.15.5 ***Sputum Positivity:*** Out of those for whom results of sputum examination were told, the percentage positive during action 2 was 40.0 for rural CS and 60.0 for urban CS (Col.11 of Table 40). (Percentages have not been calculated for actions 1 and 3 because of small numbers of rural and urban CS but the figures indicate a high positivity rate). Percentage positive was 42.9 for rural CS consulting PMP and 76.9 for urban CS consulting sanatorium. (For most of the other consultations by small number of rural and urbans CS also the positivity rate appears to be very high). Even if it is assumed that all those who were not told of the result were negative, positivity rates were still high (Col.10 of Table 40) and much more than 10% expected under NTP. The relevant figures varied from 24.2% to 33.3% for the three actions by rural CS and from 25.0% to 47.4% for the three actions by urban CS. Positivity rates from actions to

consult various health facilities varied from 15.8% to 47.1% for rural CS and from 25.0% to 62.5% for urban CS, the figures being higher for urban CS. Two possible reasons for high positivity rate are (1) health facilities order sputum examination only to confirm a clinical diagnosis of TB which they had arrived at (the very large proportion of CS for whom sputum examination has not been ordered supports this) or (2) the quality of sputum examinations was very poor, or both. In any case, the situation was very bad for NTP. The very large proportions of CS for whom sputum has not been ordered and for whom the results have not been told indicate a lack of sincerity to NTP.

2.15.6 ***X-ray Examination during each action***: At the time of first action, only 10.4% of rural CS and 19.4% of urban CS were asked to have X-ray examination (Col. 4 of Table 41). Among those ordered, 92.3% were done at the same facility (38.5% on the same day and 53.8% on another day) by rural CS and the remaining 7.7% at another facility (not shown in the Table). The corresponding figures for urban CS were : 61.5% (7.7% and 53.8%) respectively at the same facility and 30.8% at another facility, with 7.7% not getting it done. Percentage of urban CS who were asked to have X-ray done increased from 19.4% for first action to 47.5% for second action and 57.9% for third action. There was no such trend for rural CS. Among rural and urban CS who were ordered X-ray during second and third actions, the vast majority (varying from 88.9% to 93.4%) had the X-ray done at the same facility, indicating that generally only those who have facility for X-ray examination ordered it. But, most of them (52.8% to 72.7%) had to make another visit to get it done except for rural CS taking third action for whom this percentage was somewhat less (46.7%). The highest figure of 72.7% was observed for urban CS taking third action.

2.15.7 ***X-ray Examination at Health facilities :*** Out of 131 actions by rural CS leading to consultation with primary level facilities, X-ray examination was ordered for 16.8% by PMP and nil by PHC (Col.4 of Table 41). Secondary level health facilities had ordered for a higher proportion of CS (44.7% by

Table 41

Details of X-ray Examination by Rural and Urban CS
(Mysore District)

X-ray Examination During/day	No. of CS / Actions	Ordered		Examined		Results Told		Positive		
		No	% of Col.2	No.	% of Col.3	No.	% of Col.5	No.	% of Col.5	% of Col.7
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11
Rural										
During										
Action 1	135	14	*10.4*	14	*100.0*	9	*64.3*	4	*28.6*	*NC*
Action 2	91	36	*39.6*	36	*100.0*	19	*52.8*	9	*25.0*	*47.4*
Action 3	46	15	*32.6*	15	*100.0*	7	*46.7*	4	*26.7*	*NC*
By PMP	131	22	*16.8*	22	*100.0*	14	*63.6*	6	*27.3*	*42.9*
PHC	73	0	*0.0*	NA	*NA*	NA	*NA*	NA	*NA*	*NC*
GH	47	21	*44.7*	21	*100.0*	9	*42.9*	5	*23.8*	*NC*
NGH	16	7	*43.7*	7		4	*NC*	0	*NC*	*NC*
DTC	2	2	*NC*	2		2	*NC*	1	*NC*	*NC*
Sanatorium	20	20	*100.0*	20		11	*44.0*	9	*45.0*	*81.8*
Urban										
During										
Action 1	67	13	*19.4*	12	*92.3*	7	*58.3*	5	*41.7*	*NC*
Action 2	40	19	*47.5*	19	*100.0*	15	*78.9*	11	*57.9*	*73.3*
Action 3	19	11	*57.9*	11	*100.0*	6	*54.5*	4	*36.4*	*NC*
By										
PMP	78	15	*19.2*	14	*93.3*	7	*50.0*	5	*35.7*	*NC*
PHC	2	0	*NC*	NA	*NA*	NA	*NA*	NA	*NA*	*NA*
GH	25	8	*32.0*	8	*NC*	4	*NC*	3	*30.0*	*NC*
NGH	12	7	*58.3*	7	*NC*	5	*NC*	1	*NC*	*NC*
DTC	1	1	*NC*	1	*NC*	0	*NC*	NA	*NC*	*NA*
Sanatorium	16	15	*93.7*	15	*100.0*	14	*93.3*	12	*80.0*	*85.7*

NA – Not Applicable
NC – Not calculated because of very small numbers

GH and 43.7% by NGH). All were ordered X-ray by DTC/sanatorium. The situation was similar for urban CS.

2.15.8 ***Information about Results of X-ray Examination during each Action:*** Among the rural CS who had X-ray examination, the proportion who were told about the result decreased from 64.3% at first action to 52.8% at second action and 46.7% at third action (Col.8 of Table 41). The corresponding figures for urban CS were 58.3%, 78.9% and 54.5% respectively and did not show any trend.

2.15.9 ***Information about Result of X-Examination at Health Facilities :*** Among rural CS, out of all actions leading to X-ray examination, results were told to 63.6% by PMP, 42.9% by GH, 4 out of 7 by NGH and 59.1% by DTC/sanatorium (Col.8 of Table 41). The corresponding figures for urban CS were : 50.0% by PMP, 4 out of 8 by GH, 5 out of 7 by NGH and 87.5% by DTC/sanatorium.

2.15.10 ***X-ray Positivity :*** Among rural CS, out of those for whom results were told, 4 out of 9 were positive during action 1, 47,4% during action 2 and 4 out of 7 during action 3 (Col.11 of Table 41). The corresponding figures for urban CS were: 5 out of 7, 73.3% and 4 out of 6 respectively. The positivity rate during consultations by rural CS was 42.9% for PMP, 5 out of 9 for GH, nil out of 4 for NGH, 1 out of 2 for DTC and 81.8% for sanatorium. These positivity rates were high. If it is assumed that all those who were not told the results were negative, the positivity rates (Col.10 of Table 41) varied from 25.0% to 57.9% for different actions by rural and urban CS and from 23.8% to 35.7% for examinations ordered by different health facilities except for 45.0% and 80.0% at sanatorium for rural and urban CS respectively.

2.15.11 ***Information about diagnosis at each action :*** During the first action, 92.4% of rural CS were not told about what disease they were suffering from. The situation was somewhat better among urban CS (68.7% not told). Though there was some improvement for both rural and urban CS

during second and third actions, the situation was still not desirable, particularly for rural CS. The relevant figures (for diagnosis not told) were : 79.1% and 73.9% respectively for second and third actions by rural CS and 55.0% and 55.6% respectively for second and third actions by urban CS.

2.15.12 ***Information about diagnosis by Health Facilities :*** Answer to the question on whether diagnosis has been informed was available for 290 out of 292 actions taken by rural CS and for 139 out of 140 actions taken by urban CS. For the vast majority of consultations with primary and secondary level facilities the diagnosis was not told to the CS. The relevant figures were : 87.6% (rural) and 72.4% (urban) by PMP, 93.2% (rural) by PHC, 83.3% (rural) and 60.0% (urban) by GH and 87.5% (rural) and 58.3% (urban) by NGH. The situation was better for urban CS compared to rural CS but still far from satisfactory. Percentage of consultations with specialised facilities (DTC/sanatorium) for which diagnosis was not told was much less – 22.7% (rural) and 17.6% (urban) but still sizeable.

2.15.13 ***Diagnosis of TB during each action :*** Percentage of CS who were told that they were suffering from TB steadily increased with each action by rural and urban CS, with the latter having consistantly higher percentage diagnosed as TB, indicating that the percentage of TB cases out of chest symptomatics may be higher among urban CS compared to rural CS. The relevant figures were : 4.5%, 14.3% and 19.6% respectively for first, second and third actions by rural CS and 10.4%, 25.0% and 33.3% respectively for first, second and third actions by urban CS. These could also indicate fluctuating quality of diagnosis or weeding out of CS who are not suffering from TB for subsequent actions or both. Overall, 11.7% of actions by rural CS and 17.4% of actions by urban CS resulted in diagnosis of TB being told. The weighted percentage for rural and urban combined was 13.4%.

2.15.14 ***Diagnosis of TB by Health facilities :*** Proportion of consultations at primary level leading to diagnosis of TB were : 6.2% by PMP among rural CS, 7.9% by PMP among urban CS, and 5.5% by PHC among rural CS. At the secondary level, the relevant figures were : 14.6% by GH among rural CS, 20.0% by GH among urban CS and nil by NGH among both rural and urban CS. This percentage was 68.2 among rural CS and 76.5 among urban CS during consultations with DTC/sanatorium. The consistantly higher figures for urban CS compared to rural CS again indicates that prevalence of TB among chest symptomatics may be higher for urban CS compared to rural CS. The increase in this percentage from primary to secondary level and further to specialised institutions was most probably due to weeding out of non-TB cases after each level of consultation.

2.16 Treatment

2.16.1 ***Type of Treatment :*** The vast majority of actions by CS received only out-patient treatment. The relevant figures for those receiving out-patient treatment were : 97.0% (action 1), 87.9% (action 2) and 84.8% (action 3) for rural CS and 95.6%, 70.0% and 73.7% respectively for urban CS. Among the small number of CS (varying from 3 to 9) who had in-patient treatment the period varied from one week to four months.

2.16.2 ***Check-up Examination :*** None of the rural and urban CS had a check-up examination during or after the treatment received at the time of any action, except for one person each.

2.17 Satisfaction with Services

2.17.1 ***Satisfactory actions by CS:*** Services provided were generally satisfactory for nearly half of the total actions taken. Proportion of satisfactory actions by rural CS did not differ between those provided by PMP (49.6%), PHC (52.1%) and GH (52.2%). NGH fared better with 68.2% being satisfactory but was not at all popular with a contribution of only 3.8% of the total actions taken probably because of being more costly

and not attuned to the rural culture. Proportion of satisfactory actions was highest for contacts with DTC/sanatorium (86.4%), mainly sanatorium which is a specialised institution. Among actions taken by urban CS, the proportion satisfactory was least for services of GH (44.0%) followed by that by the private health facilities viz., PMP (56.8%) and NGH (58.3%). This proportion was highest for the specialised institutions viz., DTC/sanatorium (76.5%). However, the proportion not satisfied with the services at DTC/sanatorium was almost double among urban CS (23.5%) compared to that among rural CS (13.6%).

2.17.2 ***Extent of satisfaction :*** Among the satisfactory actions by rural CS, the proportion fully satisfied was highest for DTC / sanatorium (47.4%) but yet less than half. This proportion was 27.3% for NGH and 25.0% for PMP (both private health facilities) and still less for GH (16.7%) and PHC (13.2%), which are government health facilities. Among the satisfactory actions by urban CS, the proportion fully satisfied was highest for DTC/sanatorium (76.9%), which was also much higher than the corresponding proportion among rural CS (47.4%). This proportion did not differ between GH (27.3%), NGH (28.6%) and PMP (33.3%).

2.17.3 ***Reasons for satisfaction / non-satisfaction :*** When specifically asked for the reasons for satisfaction / non – satisfaction for each action, no reply was given for 3.8% of actions taken by rural CS and 27.6% by urban CS. Those who replied showed a different picture now. Only 10.3% of actions taken by rural CS and 12.3% of actions taken by urban CS were now stated to be satisfactory. The main reason for non-satisfaction was "not cured" (symptom has not subsided) among actions taken by both rural and urban CS (47%). Out of the actions taken by rural CS, 30.6% were not considered satisfactory because of only partial cure even though they felt better now and 16.3% because they were not feeling alright even though they were partially cured. These two perceptions of partial cure together formed 46.9%. The corresponding figures for action taken by urban CS were 29.0%, 11.0% and 40.0% respectively.

2.18 Reasons for Observed Behaviour

2.18.1 ***Choosing Health Facility for First Action :*** The most common reason for choosing health facility for first action by rural CS was proximity to residence or convenience (56.0%) followed by advice of friends, relatives and neighbours (25.4%) and expectation of correct diagnosis and treatment (10.4%), which together formed 91.8% (Table 42). The situation was the same for urban CS, the corresponding figures being 65.7%, 16.4%, 10.4% and 92.5% respectively.

2.18.2 ***Choosing Health Facility for Second Action :*** For second action, the weightage given to proximaty/convenience dropped steeply down to about 12% among both rural and urban CS. Only 10% took the second action because of being referred by a PMP or doctor of a PHC or hospital among both rural and urban CS and shows that the doctors contacted by them during their first action did not take any interest in referring the CS to a proper health facility even when the symptoms did not subside. Thus, the reason for choice of facility for the second action which was most frequent among rural CS was the expectation of correct diagnosis and treatment because their first action did not help to overcome their suffering (39.6%). Next came advice from lay persons such as friends, relatives etc. (34.1%). The popularity of these two reason-groups was interchanged among urban CS with advice from lay persons coming first (40.0%) and expectation of CS second (35.0%).

2.18.3 ***Choosing Health Facility for Third Action:*** Though advice of doctors influenced the choice of facility for third action by more CS (nearly double of that of second action) among both rural and urban CS, it was still as low as about 20% only. This again shows that the doctors consulted by the CS during first and second actions, often repeatedly and with continuation of symptoms, did not take enough interest in referring them to a proper health facility like DTC or sanatorium. The expectations of CS had less influence on the choice of facility for third action (about 26% among both

Table 42

Distribution of CS by reason for choosing the health facility contacted for each action (Mysore District)

Reason	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Referred by Doctor	0	*0.0*	6	*6.6*	1	*2.2*	0	*0.0*	4	*10.0*	2	*10.5*
a) PMP	0	*0.0*	3	*3.3*	7	*15.2*	0	*0.0*	0	*0.0*	2	*10.5*
b) PHC/Hospital												
Sub Total	**0**	***0.0***	**9**	***9.9***	**8**	***17.4***	**0**	***0.0***	**4**	***10.0***	**4**	***21.1***
2. Advised by Lay persons	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	1	*5.3*
a) TB Patient	3.4	*25.5*	31	*34.1*	15	*32.6*	11	*16.4*	16	*40.0*	8	*42.1*
b) Friends, Relatives, etc	0	*0.0*	0	*0.0*	1	*2.2*	1	*1.5*	0	*0.0*	0	*0.0*
c) Social Worker/Local Leader												
Sub Total	**34**	***25.4***	**31**	***34.1***	**16**	***34.8***	**12**	***17.9***	**16**	***40.0***	**9**	***47.4***
3. Expectation	6	*4.5*	4	*4.4*	6	*13.0*	2	*3.0*	0	*0.0*	1	*5.3*
a) Free diagnosis and Treatment.	14	*10.4*	11	*12.1*	2	*4.3*	7	*10.4*	5	*12.5*	3	*15.8*
b) Correct diagnosis and Treatment	1	*0.7*	21	*23.1*	4	*8.7*	1	*1.5*	9	*22.5*	1	*5.3*
c) Better treatment than from earlier action												
Sub Total	**21**	***15.7***	**36**	***39.6***	**12**	***26.1***	**10**	***14.9***	**14**	***35.0***	**5**	***26.3***
4. Proximity or Convenienc	75	*56.0*	11	*12.1*	9	*19.6*	44	*65.7*	5	*12.5*	1	*5.3*
5. Others	4	*3.0*	4	*4.4*	1	*2.2*	1	*1.5*	1	*2.5*	0	*0.0*
Total	**134**		**91**		**46**		**67**		**40**		**19**	
NS	1	*0.7*	0	*0.0*	0	*0.0*	6	*8.2*	0	*0.0*	0	*0.0*

rural and urban CS). Advice from lay persons (friends, relatives etc) was the most frequent reason, this being more so among urban CS (47.4%) compared to rural CS (34.8%). Thus, despite repeatedly contacting doctors, the choice of health facility for third action was predominantly the advice of lay persons. It is also significant that expectation of correct diagnosis and treatment which had increased from about 15% for first action to nearly 40% for second action dropped down to about 26%. This probably shows that they no longer looked for it out of frustration or disillusionment.

2.18.4 ***Reason for not taking action :*** Among rural CS, the most common reason for not taking any action was no money (21.4%) followed by a "will become alright" belief (17.9%), using traditional/home remedies, pooja etc. (10.7%) and HOH not showing interest (7.1%). About one-third of them did not give any clear reason. The situation was similar among urban CS, except that only less than 10% did not give any clear reason. The main reasons were : no money (27.3%), "will become alright" belief and using traditional / home remedies, pooja etc. (18.2% each) and old age, do not want to go and none to accompany (9.1% each).

2.18.5 ***Reason for Multiple Visits :*** "To get relief from suffering / earlier action did not provide relief" was the predominant reason for making multiple visits – 97.8% among rural CS and 87.8% among urban CS. About 5% of urban CS and no rural CS stated that when they suspected TB they changed to specialised health facilities. It is significant that only 2.4% of urban CS and no rural CS mentioned that they changed because they were referred by a doctor.

2.18.6 ***Suggestions to other CS :*** When asked about which health facilities they would suggest to other CS on the basis of their experience, the most common reply among rural CS was no advice (30.8%) followed by PMP (26.9%), PHC (15.4%) and sanatorium (14.6%). Only one CS (0.8%) advised visit to DTC. Among urban CS, the most frequent reply was PMP

(35.4%) followed by no advice (27.7%), hospital (12.3%) and sanatorium (10.0%). Only one CS (1.5%) advised visit to DTC.

2.18.7 ***Remarks from CS who had taken multiple actions :*** Those CS who had contacted more than one facility were asked their opinion about which facility they had unnecessarily visited. Among the rural CS, the most common reply was PMP (27.3%) followed by PMP and PHC/GH (17.0%), PHC (12.5%) and GH (10.2%). Among urban CS, the most frequent reply was PMP (59.0%) followed by GH and combination of PMP and PHC/GH (7.7% each). None of the visits were considered to be unnecessary by 20.4% of rural CS and 10.2% of urban CS.

2.18.8 ***Suggestions for improvement :*** The CS were asked for suggestions to improve the services. Their answers were analysed in the context of the TB programme. Among urban CS, 46.3% had not visited a PHI. Out of the remaining CS, 91.7% did not give any suggestions for improvement and 8.3% wanted free treatment to be given in PHIs. Among rural CS, 21.0% had not visited a PHI. Out of the remaining CS, 82.7% did not suggest any improvement, 9.2% wanted free treatment to be given by PHIs and 8.2% wanted quality of services to be improved. The question of improvement of DTC services did not arise because only one each of rural and urban CS had visited the DTC.

2.19 Self-suspected TB Cases

2.19.1 ***Prevalence of self suspected TB :*** The CS were asked whether they suspected that they were suffering from TB. Out of the 202 CS for whom information was available, 28 stated "Yes" - 17 in rural areas and 11 in urban areas. The proportion who suspected was 12.6% of rural CS and 16.4% of urban CS. The prevalence rate of self-suspected TB cases in the population was 1.7 per 1,000 (rural), and 1.0 per 1,000 (urban) and 1.5 per 1,000 (overall). The proportion of female self-suspected TB cases was 41.2% overall - 47.1% (rural) and 27.3% (urban).

2.19.2 ***Prevalence rate for self- suspected TB by age and sex :*** Table 43 shows the number, prevalence rate and percentage of self-suspected TB cases in different age-sex groups. The prevalence rate (in the population of age 15 or more) was higher in rural areas (2.4 per 1,000) compared to urban areas (1.5 per 1,000) the overall rate being 2.1 per 1,000. This was also higher among males (2.4 per 1,000) compared to females (1.8 per 1,000). The difference between prevalence rates for males and females was less in rural areas. Age group 15-34 had smaller prevalence rate (1.6 per 1,000) compared to the other two age groups 35-54 and 55+ which were equal (2.8 to 2.7 per 1,000 respectively)

2.19.3 ***Age distribution of self-suspected TB Cases :*** The overall weighted proportions in difference age groups showed a peak in age 35-54 (42.5%) followed by 39.8% in age 15-34 and 17.8% in age 55+. The corresponding percentages were 41.2, 41.2 and 17.6 respectively in rural areas and 45.5, 36.4 and 18.2 respectively in urban areas. The overall unweighted proportions, which are based on larger numbers, were very close to the overall weighted proportions and shows the same picture.

2.19.4 ***Influence of suspicion about having TB on action taken :*** Asked whether their suspicion of having TB had influenced their action taking, 33.3% in rural areas and 36.3% in urban areas stated that it influenced them to seek proper health facilities for diagnosis and treatment. It is significant that their own suspicion had influenced much more than referral by doctors whom they had contacted repeatedly. There was no influence on 20.0% (rural) and 36.3% (urban). To the question whether their suspicion led to their seeking advice of friends, relatives and neighbours, 94.1% (rural) and 63.6% (urban) answered in the negative. **This may be due to fear induced by stigma.** The remaining 5.9% in rural areas and 36.4% in urban areas stated that they sought their help and found their advice useful in making a proper choice of facility for diagnosis and treatment.

Table 43

Number (No.), prevalence rate per thousand (PR) and percentage (P) of self-suspected TB Cases In different Age-Sex Groups in Rural and Urban Areas (Mysore District)

Area	Sex	Age Group											
		15 - 34			35 - 54			55+			15+		
		No.	PR	P	No.	PR	P	No.	PR	P	No.	PR	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Rural	F	5	2.7	*62.5*	2	1.8	*25.0*	1	1.9	*12.5*	8	2.3	*100*
	M	2	1.1	*22.2*	5	4.2	*55.6*	2	3.9	*22.2*	9	2.6	*100*
	T	7	1.9	*41.2*	7	3.0	*41.2*	3	2.9	*17.6*	17	2.4	*100*
Urban	F	2	1.0	*NC*	1	0.9	*NC*	0	0.0	*NC*	3	0.8	*N.C*
	M	2	1.0	*25.0*	4	3.3	*50.0*	2	4.1	*25.0*	8	2.1	*100*
	T	4	1.0	*36.4*	5	2.2	*45.5*	2	2.1	*18.2*	11	1.5	*100*
Rural + Urban (Weighted PR and Percentage)	F		2.2	*NC*		1.5	*NC*		1.3	*NC*		1.8	*NC*
	M		1.1	*23.0*		3.9	*53.9*		4.0	*23.0*		2.4	*100*
	T		1.6	*39.8*		2.8	*42.5*		2.7	*17.8*		2.1	*100*
Rural + Urban (Unweighted Percentage)	F	7		*63.6*	3		*27.3*	1		*9.1*	11		*100*
	M	4		*23.5*	9		*52.9*	4		*23.5*	17		*100*
	T	11		*39.3*	12		*42.9*	5		*17.9*	28		*100*

Note : Percentages in different groups are calculated on small numbers (8 to 17). Percentage not calculated (NC) for urban females with 3 CS only. The prevalence rates are based on small numerators

2.20 Cost

2.20.1 ***Calculation of average cost :*** The average for total cost and its two components viz., direct cost and indirect cost as well as for the sub-components of each of these under different cost heads are given in Tables 44 to 47. The average total cost is based on the distribution of total cost and not on the total of the average costs for its two components. Similarly, the average for direct and indirect costs are based on their distributions and not on the total of the average costs for their sub-components. The latter are not based on uniform class intervals (ranges) of cost and have different mode values. Further, the average cost of sub-components / components are more likely to be influenced by extreme values than average of total cost because these extreme values form a comparatively larger proportion of the sub-component's / component's distribution than of the distribution of total cost. This is illustrated by three distributions each given in Tables 44 and 45. The distribution of indirect cost formed an inverted J-distribution with nil values to the extent of more than 50% of the total and yet did not influence the distribution of total cost which resembles a normal distribution. Due to these two reasons given above, the addition of average costs for sub-components / components gives a different and less reliable value for average of total cost than that obtained from the distribution of total cost. This is more striking in the case of sub-components of indirect cost given under item 2 of Tables 46 and 47.

2.20.2 ***Distribution of Direct, Indirect and Total Costs :*** Tables 44 and 45 show the distribution of direct, indirect and total costs and the averages for these. Indirect cost incurred by both rural and urban CS formed inverted J-distributions with more than 50% of CS having no indirect cost. The distributions of direct and total costs incurred by rural CS were unimodel with modes in the cost range of Rs.600-999 for direct cost and the combined range of Rs.600-1999 for total cost. But, while the distribution of direct cost incurred by urban CS was biomodel with one mode in the

Table 44

Distribution of rural CS by direct, indirect and total cost (Mysore district)

Cost Range (Rs.)	Direct Cost		Indirect Cost		Total Cost	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Nil	0	0.0	74	54.8	0	0.0
001 – 099	11	8.1	17	12.6	9	6.7
100 – 199	17	12.6	5	3.7	17	12.6
200 – 599	27	20.0	17	12.6	23	17.0
600 – 999	35	25.9	5	3.7	29	21.5
1000 – 1999	25	18.5	6	4.4	29	21.5
2000 – 3999	15	11.1	7	5.2	15	11.1
4000+	5	3.7	4	3.0	13	9.6
Total	**135**		**135**		**135**	
Mean Cost (Rs.)	***1,148***		***518***		***1,472***	

Table 45

Distribution of urban CS by direct, indirect and total cost (Mysore district)

Cost Range (Rs.)	Direct Cost		Indirect Cost		Total Cost	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Nil	1	1.5	38	56.7	0	0.0
001 – 099	1	1.5	5	7.5	1	1.5
100 – 199	7	10.4	5	7.5	6	9.0
200 – 599	20	29.9	3	4.5	19	28.4
600 – 999	4	6.0	3	4.5	4	6.0
1000 – 1999	21	31.3	4	6.0	17	25.4
2000 – 3999	7	10.4	5	7.5	8	11.9
4000+	6	9.0	4	6.0	12	17.9
Total	**67**		**67**		**67**	
Mean Cost (Rs.)	***1,512***		***716***		***2,094***	

cost range of Rs.200-599 and the other in the cost range of Rs.1000-1999, that of total cost appears to have three modes in the cost ranges of Rs.200-599, Rs.1000-1999 and Rs.4000 or more. Proportion having direct cost of Rs.1,000 or more was less (33.3%) among rural CS compared to that among urban CS (50.7%). Those incurring total cost of Rs.1000 or more was also less among rural CS (42.2%) compared to that among urban CS (55.2%), but the difference was smaller. The overall proportion was 46.1% for total cost and 38.5% for direct cost. (weighted percentages for rural and urban combined). The average total cost incurred by urban CS (Rs.2,094) was about 1.5 times of that incurred by rural CS (Rs.1,472). Averages for both direct and indirect costs were higher for urban CS compared to rural CS.

2.20.3 ***Average cost under different cost heads during each action :*** Among rural CS, averages for direct, indirect and total costs were maximum during third action (Table 46). Direct and indirect costs incurred during fifth and sixth actions came next. Under direct cost, the maximum contribution was from cost of medicines which was far more than any of the other components. This was maximum (about Rs.650) during third and fifth actions and much less (Rs.250) during fourth action. It was least (Rs.75 only) for seventh action among the few CS who had taken seven actions. Travel cost was a poor second closely followed by cost of consultation at third place. Under indirect cost, wage loss and cost for substitution of labour were of equal importance. Urban CS showed a different picture (Table 47). Direct, indirect and total costs were maximum for fourth action followed by second action. While the major part of direct cost was for cost of medicines (as in the case of rural CS), cost of consultation came second and travel cost third, interchanging their position for rural CS. Wage loss became the major component of indirect cost.

2.20.4 ***Contribution of direct cost during each action :*** Proportion of direct cost out of total cost incurred by rural CS decreased steadily from 75.5% during first action to 73.9% during second action and to 65.2% during third

Table 46

Mean cost under different cost heads for each action by rural CS (Mysore district)

Cost Head	Cost (in Rs.) for action							
	1	2	3	4	5	6	7	All
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Direct cost for								
a) Travel	60	92	135	99	82	30	10	168
b) Consultation	53	39	65	80	25	0	0	101
c) Sputum Examination	2	5	5	8	0	0	0	7
d) X-ray Examination	6	18	13	25	3	0	0	25
e) Medicines	378	314	647	250	650	462	75	795
f) Special diet	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
g) Tonics	10	17	24	25	53	15	0	33
h) Medicine Collection	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
i) Check-up Examination	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Sub Total	**501**	**499**	**905**	**496**	**700**	**762**	**75**	**1,148**
2. Indirect Cost								
a) Wage loss	53	50	50	87	< 1	< 1	< 1	78
b) Substitute Cost	37	36	75	64	< 1	< 1	< 1	63
c) Others	5	7	2	< 1	< 1	< 1	< 1	11
Sub Total	**181**	**178**	**646**	**168**	**< 1**	**< 1**	**< 1**	**518**
3. **Total Cost**	**664**	**676**	**1,387**	**668**	**700**	**762**	**75**	**1,472**
No. of CS	134	91	46	14	3	2	1	134

Table 47

Mean cost under different cost heads for each action by urban CS (Mysore district)

Cost Head	Cost (in Rs.) for action							
	1	2	3	4	5	6	7	All
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Direct cost for								
a) Travel	26	89	56	175	30	-	NA	61
b) Consultation	90	73	63	104	25	25	NA	149
j) Sputum Examination	5	5	7	4	0	0	NA	10
k) X-ray Examination	14	22	16	21	0	0	NA	34
l) Medicines	497	834	462	767	300	25	NA	1,121
m) Special diet	< 1	< 1	< 1	< 1	< 1	< 1	NA	< 1
n) Tonics	23	33	68	58	125	0	NA	2
o) Medicine Collection	0	3	0	15	0	0	NA	3
p) Check-up Examination	0	6	0	0	0	0	NA	3
Sub Total	**619**	**1,115**	**905**	**1,171**	**300**	**75**	**NA**	**1,512**
2. Indirect Cost								
a) Wage loss	79	93	146	183	0	0	NA	116
b) Substitute Cost	19	54	0	42	0	0	NA	41
c) Others	2	19	0	92	0	0	NA	20
Sub Total	**233**	**573**	**414**	**1,217**	**0**	**0**	**NA**	**716**
3. Total Cost	**855**	**1,590**	**1,092**	**2,267**	**300**	**75**	**NA**	**2,094**
No. of CS	67	40	19	6	1	1	0	67

action and then increased to 74.3% during fourth action and to 100% during fifth, sixth and seventh actions. There was no such trend for urban CS. This proportion did not differ much between rural and urban CS during first and second actions - 75.5% (rural) and 72.4% (urban) during first action and 73.9% (rural) and 70.1% (urban) during second action. The contribution of direct cost was much higher for urban CS (82.9%) compared to rural CS (65.2%) during third action. The situation was the opposite during fourth action with percentages of 51.7 for urban CS and 74.3 for rural CS. For the vast majority of CS (67.9%), direct cost formed 80% or more of the total cost. While the contribution of direct cost was between 40% and 79% for 21.3% of CS, it was less than 40% for 10.7% of CS. The situation did not differ between rural and urban CS. (Percentages given above are weighted figures for rural and urban combined).

2.20.5 ***Cost incurred by rural CS at Health Facilities :*** Average cost was the same (Rs.1,350 to 1,360) for single and multiple actions for consulting PMP and for multiple actions for consulting GHFs at primary and secondary levels (Table 48). Average cost for multiple action for consulting PHC (Rs.1,045) was about double of that for single action for consulting PHC (Rs.506). The difference between PMP and PHC in this respect is surprising. Average cost for multiple actions for consulting combinations of GHFs and SHFs (mainly santorium) was much higher (Rs.3,395) and was the highest of the averages shown in Tables 48 and 49. Distributions of cost also show some differences. Cost for consultations with PHC (both for single and multiple actions) had inverted J-distributions indicating that the cost for most of the actions were small (less than Rs.200 for single actions and less than Rs.600 for multiple actions). Distribution of cost for consultations with PMP (both for single and multiple actions) resembled a normal distribution with mode in the cost range of Rs.600-999, but that for multiple actions had almost double the frequency in cost range of Rs.1,000 – Rs.2,999 (40.0%) compared to

Table 48

Distribution of Cost incurred by rural CS at different health facilities (Mysore district)

No. of Actions and type of Health Facility	Cost range (Rs.)										Mean cost (Rs.)
	001-199		200-599		600-999		1000-2999		3000+		
	No.	%	No.	%	No.	%	No.	%	No.	%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A By no. of actions and type											
1. Single action at											
a) PMP	2	*11.1*	3	*16.7*	8	*44.4*	4	22.2	1	5.6	1,350
b) PHC	14	*66.7*	4	*19.0*	1	*4.8*	1	*4.8*	1	*4.8*	506
c) GH	2		1		0		1		0		NC
d) NGH	1		0		0		0		0		NC
2. Multiple actions at GHFs of same level											
a) PMP	0	*0.0*	0	*0.0*	5	*50.0*	4	*40.0*	1	*10.0*	1,360
b) PHC	6	*40.0*	5	*33.3*	1	*6.7*	1	*6.7*	2	*13.3*	1,045
3. Multiple actions at both levels											
a) GHFs only	1	*2.3*	9	*20.9*	11	*25.6*	19	*44.2*	3	*7.0*	1,352
b) GHFs and SHFs	0	*0.0*	0	*0.0*	3	*15.8*	6	*31.6*	10	52.6	3,395
c) Others	0		1		0		3		0		
Total	**26**		**23**		**29**		**39**		**18**		
B. Type of HF											
a) Government	22	*50.0*	10	*22.7*	3	*6.8*	4	9.1	5	*11.4*	947
b) Private	3	*7.9*	4	*10.5*	16	*42.1*	12	31.6	3	*7.9*	1,420
c) Govt & Pvt.	1	*1.9*	9	*17.0*	10	*18.9*	23	43.4	10	*18.9*	1,946
Total	**26**		**23**		**29**		**39**		**18**		

that for single actions (22.2%). For multiple actions to GHFs only, the distribution was skewed to the right with mode in the cost range of Rs.1,000 – 2,999. Distribution of cost for multiple actions for consultations with both GHFs and SHFs (mainly sanatorium) was J-shaped with the maximum frequency of 52.6% for cost range of Rs.3,000 or more. The lower part of Table 48 shows that the average cost increased from Rs.947 for government health facilities to Rs.1,420 for private health facilities and to Rs.1,946 for consulting both types of facilities. The high cost for the last group may be due to the inclusion of sanatorium (a government SHF with in-patients). While the distribution of cost had an inverted J-shape for government facilities, it was skewed to the right for the others, with mode in the cost range of Rs.600-999 for private facilities and Rs.1,000-2,999 for combined use of both types of facilities.

2.20.6 ***Cost incurred by Urban CS at Health Facilities :*** Unlike for rural CS, the average cost for multiple actions for consulting PMP at primary level was 2.8 times of that for single actions, the average cost being Rs.2,580 and Rs.926 respectively (Table 49). The former was even more than that for multiple consultations to both primary and secondary GHFs (Rs.2,433). The average cost for multiple actions for consulting both GHFs and SHFs (mainly sanatorium) was Rs.3,333 (the second highest of the averages shown in Table 48 and 49) and did not differ much from that incurred by rural CS (Rs.3,395). Cost distributions for single and multiple consultations with PMP were unimodal with mode in the cost range of Rs.200-599 and Rs.1,000-2,999 respectively. Multiple consultations with GHFs only at both levels had a bimodal distribution with the higher peak in cost range of Rs.1,000-2,999 and the lower peak in the cost range of Rs.200-599. Distribution of cost for multiple consultations with GHFs and SHFs (mainly sanatorium) was J-shaped with the maximum frequency of 53.3% for the cost range of Rs.3,000 or more. The lower part of Table 49 shows that cost distribution for all the three types of facilities were bimodal with the higher peak in the cost range of Rs.200-599 and the lower peak in the

Table 49

Distribution of Cost incurred by urban CS at different health facilities (Mysore district)

No. of Actions and type of Health Facility	Cost range (Rs.)										Mean cost (Rs.)
	001-199		200-599		600-999		1000-2999		3000+		
	No.	%	No.	%	No.	%	No.	%	No.	%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A By no. of actions and type											
1. Single action at											
a) PMP	5	*25.0*	9	*45.0*	2	*10.0*	2	*10.0*	2	*10.0*	926
b) GH	2	*NC*	3	*NC*	1	*NC*	0	*NC*	0	*NC*	NC
c) Sanatorium	0	*NA*	0	*NA*	0	*NA*	1	*NC*	0	*NA*	NC
2. Multiple actions at GHFs of same level											
a) PMP	0	*0.0*	3	*30.0*	0	*0.0*	5	*50.0*	2	*20.0*	2,580
3. Multiple actions At both levels											
a) GHFs only	0	*0.0*	4	*26.7*	1	*6.7*	7	*46.7*	3	*20.0*	2,433
b) GHFs and SHFs	0	*0.0*	0	*0.0*	0	*0.0*	7	*46.7*	8	*53.3*	3,333
Total	**7**		**19**		**4**		**22**		**15**		
B. Type of HF											
a) Government	2	25.0	3	*37.5*	1	*12.5*	2	25.0	0	*0.0*	687
b) Private	5	*14.7*	12	*35.3*	3	*8.8*	8	23.5	6	*17.6*	1,648
c) Govt & Pvt.	0	*0.0*	4	*16.0*	0	*0.0*	12	48.0	9	*36.0*	3,041
Total	**7**		**19**		**4**		**22**		**15**		

Note : No. of CS was nil under A1 for PHC, NGN, DTC and sanatorium, Under B2 for PHC, GH and NGH and under A3 for 'others'

cost range of Rs.1,000-2,999 for government and private facilities and the reverse for combined use of both types. Average cost increased from Rs.687 for government facilities to Rs.1,648 for private facilities and Rs.3,041 for their combined use. The higher figure for the last group was the third highest of the averages shown in Tables 48 and 49 and was about 1.6 times the corresponding average for rural CS.

2.20.7 ***Influence of Sex:*** Table 50 shows that the distribution of cost by sex is bimodal except for rural female CS for whom there was a steady increase in frequencies (percentages) with increase in cost, except for a drop in cost range of Rs.3,000 or more. The mode was in the cost range of Rs.1,000-2,999. For the other three distributions, the higher peak was at cost range of Rs.1,000-2,999 and lower peak at cost range of Rs.1-199 for rural males and at cost range of Rs.200-599 for urban males and females. While the average cost was the same for rural males and females, it was higher (almost double) for males (Rs.2,584) compared to females (Rs.1,369) among urban CS. This high cost for urban males was due to 30% of them spending Rs.3,000 or more compared to only 11.1% of urban females. Those spending Rs.1,000 or more was much higher among urban males (62.5%) compared to urban females and rural males and females (41.1% to 44.4%).

2.20.8 ***Influence of Age :*** Among rural CS, average cost steadily decreased with increase in age, that for age 55+ being as low as Rs.954 which was less than half of average cost of Rs.1,996 for 15-34 age group (Table 50). Those of age 55+ had the least average cost among urban CS also (Rs.1,438) but the highest average was for age 35-54 (Rs.2,519) which was about 1.8 times of that for age 55+. Rural CS of age 55+ and all the three age groups of urban CS had bimodal distributions, with the former having the higher peak in cost range of Rs.200-599 and the other three in cost range of Rs.1,000-2,999. Amogn rural CS, the proportion spending Rs.1,000 or more steadily decreased with increase in age from 64.2% for 15-34 to 42.7% for 35-54 and to 28.3% for 55+. But there was no such

Table 50

Distribution of total cost for different population groups (Mysore district)

No. of Actions and type of Health Facility	Cost range (Rs.)										Mean cost (Rs.)
	001-199		200-599		600-999		1000-2999		3000+		
	No.	%	No.	%	No.	%	No.	%	No.	%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. R: Sex											
a) Females	6	*12.0*	8	*16.0*	14	*28.0*	15	*30.0*	7	*14.0*	1,441
b) Males	20	*23.5*	15	*17.6*	15	*17.6*	24	*28.2*	11	*12.9*	1,491
2. U: Sex											
a) Females	4	*14.8*	8	*29.6*	3	*11.1*	9	*33.3*	3	*11.1*	1,369
b) Males	3	*7.5*	11	*27.5*	1	*2.5*	13	*32.5*	12	*30.0*	2,584
3. R: Age Group											
a) 15-34	3	*10.7*	3	*10.7*	4	*14.3*	11	*39.2*	7	*25.0*	1,996
b) 35-54	13	*21.3*	7	*11.5*	15	*24.6*	16	*26.3*	10	*16.4*	1,623
c) 55+	10	*21.8*	13	*28.3*	10	*21.7*	12	*26.1*	1	*2.2*	954
4. U: Age Group											
a) 15-34	1	*6.2*	7	*43.8*	0	*0.0*	5	*31.3*	3	*18.7*	1,753
b) 35-54	2	*5.6*	8	*22.2*	4	*11.1*	12	*33.3*	10	*27.8*	2,519
c) 55+	4	*26.7*	4	*26.7*	0	*0.0*	5	*33.3*	2	*13.4*	1,438
5. R:Type of Family :											
a) Nuclear	9	*17.7*	4	*7.8*	11	*21.6*	17	*33.4*	10	*19.6*	1,973
b) Joint	17	*20.7*	17	*20.7*	18	*22.0*	22	*26.9*	8	*9.8*	1,187
6. U:Type of Family :											
a) Nuclear	3	*9.1*	8	*24.2*	3	*9.1*	12	*36.4*	7	*21.2*	2,141
b) Joint	4	*13.7*	10	*34.5*	1	*3.4*	8	*27.6*	6	*20.7*	1,806
7. R: No. of Earning Members											
a) 1	5	*15.6*	7	*21.9*	7	*21.9*	8	*25.0*	5	*15.6*	1,656
b) 2	8	*22.2*	5	*13.9*	6	*16.7*	11	*30.6*	6	*16.6*	1,626
c) 3+	13	*19.4*	11	*16.4*	16	*23.9*	20	*29.9*	7	*10.5*	1,302
8. U: No. of Earning Members											
a) 1	1	*3.6*	10	*35.7*	2	*7.1*	6	*21.4*	9	*32.1*	2,438
b) 2	2	*11.8*	5	*29.4*	1	*5.9*	7	*41.1*	2	*11.8*	1,635
c) 3+	4	*18.2*	4	*18.2*	1	*4.5*	9	*40.9*	4	*18.2*	2,012

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
9. R: Highest Education Status											
a) Illiterate	5	*21.7*	1	*4.3*	8	*34.8*	4	*17.4*	5	*21.7*	1,874
b) Below SSC	13	*18.3*	10	*14.1*	15	*21.1*	24	*33.8*	9	*12.6*	1,493
c) SSC+	8	*19.5*	12	*29.3*	6	*14.6*	11	*26.8*	4	*9.7*	1,212
10. U: Highest Education Status											
a) Illiterate	3	*27.2*	4	*36.4*	1	*9.1*	3	*27.3*	0	*0.0*	684
b) Below SSC	1	*4.5*	8	*36.4*	1	*4.5*	5	*22.7*	7	*31.8*	2,539
c) SSC+	3	*8.8*	7	*20.6*	2	*5.9*	14	*41.2*	8	*23.5*	2,263
11. R: Occupation											
a) Unemployed & students	3	*13.6*	9	*40.9*	5	*22.7*	5	*22.7*	0	*0.0*	786
b) Housewives	6	*15.8*	3	*7.9*	10	*26.3*	13	*34.2*	6	*15.8*	1,591
c) Employed	17	*22.7*	11	*14.7*	14	*18.7*	21	*28.0*	12	*16.0*	1,614
12. U: Occupation											
a) Unemployed & students	2	*20.0*	4	*40.0*	0	*0.0*	3	*30.0*	1	*10.0*	1,010
b) Housewives	3	*15.8*	5	*26.3*	3	*15.8*	6	*31.6*	2	*10.6*	1,245
c) Employed	2	*5.2*	10	*26.3*	1	*2.6*	13	*34.2*	12	*31.5*	2,805
13. R: Duration of Cough (weeks)											
a) 3-13	9	*52.9*	2	*11.8*	4	*23.5*	1	*5.9*	1	*5.9*	628
b) 14-26	9	*20.5*	12	*27.3*	12	*37.3*	9	*20.5*	2	*4.6*	884
c) 27-52	4	*15.4*	4	*15.4*	5	*19.2*	10	*38.5*	3	*11.5*	1,462
d) 53+	4	8.3	5	*10.4*	8	*16.7*	19	*39.6*	12	*24.8*	2,317
14. U: Duration of Cough (weeks)											
a) 3-13	4	22.3	12	*66.7*	2	*11.1*	0	*0.0*	0	*0.0*	371
b) 14-26	2	11.8	2	*11.8*	2	*11.8*	7	*41.2*	4	*23.6*	1,918
c) 27-52	1	7.1	3	*21.4*	0	*0.0*	6	*42.8*	4	*28.5*	2,589
d) 53+	0	0.0	2	*11.1*	0	*0.0*	9	*50.0*	7	*38.9*	3,600
15. R: Family size											
a) 1-6	18	20.9	11	*12.8*	23	*26.7*	23	*26.7*	11	*12.8*	1,489
b) 7+	8	16.3	12	*24.5*	6	*12.2*	16	*32.7*	7	*14.3*	1,443
16. U: Family size											
a) 1-6	4	9.1	12	*27.3*	3	*6.8*	17	*38.6*	8	*18.2*	2,032
b) 7+	3	13.0	7	*30.4*	1	*4.3*	5	*21.7*	7	*30.4*	2,214

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
17. R: Religion & Caste											
a) SC/ST	9	*25.0*	6	*16.7*	5	*13.9*	11	*30.6*	5	*13.9*	1,594
b) BC	16	*18.4*	17	*19.5*	20	*23.0*	22	*25.3*	12	*13.8*	1,361
c) Other Hindus	1	*10.0*	0	*0.0*	4	*40.0*	5	*50.0*	0	*0.0*	1,397
18. U:Religion & Caste											
a) SC/ST	2	*11.8*	6	*35.3*	0	*0.0*	5	*29.4*	4	*23.5*	1,988
b) BC	4	*10.8*	9	*24.3*	3	*8.1*	14	*37.8*	7	*18.9*	1,880
c) Other Hindus	1	*11.1*	2	*22.2*	1	*11.1*	2	*22.2*	3	*33.3*	3,128

trend among urban CS, this proportion being highest (61.1%) for age 35-54 and about equal (46.7% and 50.0%) for the other two age groups.

2.20.9 ***Influence of Type of Family :*** Average cost was higher for rural and urban CS of nuclear families compared to that of CS in joint families, the difference being larger for rural CS (Table 50). The distributions were bimodal except for rural CS of joint families which had high frequencies in the lower three cost ranges and a peak in cost range of Rs.1,000 – Rs.2,999. Among urban CS, both types of families had bimodal distributions. While CS of nuclear families had the higher peak at cost range of Rs.1,000 – 2,999 and the lower peak in cost range of Rs.200 – 599, the opposite was the case for CS of joint families. Among rural and urban CS, the proportion spending Rs.1,000 or more was higher in nuclear families compared to joint families. The relevant figures were : 53.0% and 36.7% respectively among rural CS and 57.6% and 48.3% respectively among urban CS.

2.20.10 ***Influence of number of earning members in the family :*** Surprisingly, the average cost was least for rural CS in families with three or more earning members (Rs.1,302) (Table 50). Even urban CS in families with three or more earning members had spent only Rs.2,012 compared to those in families with one earning member (Rs.2,438), the latter being the highest average cost among the six groups under this item in Table 50. All the distributions were bimodal except for rural CS in families with one earning member which had a unimodal distribution skewed to the right and with the mode at cost range of Rs.1,000 – 2,999. Out of the other five distributions, four had the highest peak at cost range of Rs.1,000 – 2,999 and the other viz., for urban CS in families with one earning member had the higher peak at cost range of Rs.200 – 599. The proportion spending Rs.1,000 or more was higher for urban CS of all the three groups compared to that for the respective groups among rural CS, the percentages varying from 53.5 to 59.1 for urban CS and 40.4 to 47.2 for rural CS.

2.20.11 ***Influence of Highest Education status in HH :*** Among rural CS, the average cost was highest in families with only illiterates (Rs.1,874) followed by CS in families with highest education status of below SSC (Rs.1,493) and by CS in families with the highest education status of SSC+ (Rs.1,212), showing a decreasing trend with increase in education status (Table 50). On the contrary, among urban CS, those in families with only illiterates and had the least average cost (Rs.684) which was only about one-third of the average cost for CS in families with highest education status SSC+ (Rs.2,263) and about one-fourth of that for CS in families with highest education status below SSC (Rs.2,539). All the six groups had bimodal distributions. While the higher peak was at cost range of Rs. 200 – 599 for three distributions, it was at cost range of Rs. 1,000 – 2,999 for two and at cost range of Rs. 600 – 900 for the last. The percentage of urban CS spending Rs. 1,000 or more showed an increasing trend with increase in education. Relevant figures were : 27.3% for CS in families with only illiterates, 54.5% for CS in families with highest education status of below SSC and 64.7% for CS in families with highest education status of SSC+. There was no such trend among rural CS for whom the proportion spending Rs.1,000 or more varied from 36.5% to 46.4% which was equal to or less than the overall average of 46.1% (Refer para 2.20.2).

2.20.12 ***Influence of Occupation :*** Among both rural and urban CS, average cost was highest for employed CS followed by housewives and least for unemployed and students of age 15 or more (Table 50). Among the six groups, average cost was least (Rs.786) for unemployed and students among rural CS and highest (Rs.2,805) among employed urban CS, the latter being 3.6 times the former. All distributions of cost were bimodal except that for unemployed and students among rural CS which had a unmodal distribution with the mode in cost range of Rs.200 – 599. Out of the other five, four had the higher peak at cost range of Rs.1000 – 2999 and the other at cost range of Rs.200 – 599. Proportion who had spent

Rs.1,000 or more was least (22.7%) for unemployed and students among rural CS and highest (65.7%) for employed urban CS. For the other four groups the proportion varied from 40% to 50% only.

2.20.13 ***Influence of duration of cough :*** As could be expected, average cost increased with increase in duration of cough among both rural and urban CS (Table 50). Average cost was much higher among urban CS compared to rural CS for all the four durations of cough except 3-13 weeks for which average cost among urban CS was only about 60% of that for rural CS. Urban CS with duration of 53 weeks or more had the highest average cost (Rs.3,600) among all the population groups shown in Table 50 and was much higher than the second highest average cost (Rs.2,805) for employed urban CS. Unlike for other population groups, out of eight distributions of cost, five were unimodal with three of these having mode in the cost range of Rs.1,000 – 2,999, one at the combined cost range of Rs.200 – 999 and the other in cost range of Rs.200 – 599. Among the three bimodal distributions, two had the higher peak at cost range of Rs.1,000 – 2999 and the other (with duration of 3-13 weeks) at the cost range of Rs. 1 – 199. The proportion who had spent Rs.1,000 or more was higher among urban CS compared to rural CS for all durations except 3-13 weeks. This proportion steadily increased with increase in duration beyond 13 weeks among both urban and rural CS, but was steeper and at a higher level for urban CS. Relevant figures were : 25.1% for 14-26 weeks, 50.0% for 27-52 weeks and 64.4% for 53 weeks or more among rural CS and 64.8% for 14-26 weeks, 71.3% for 27-52 weeks and 88.9% for 53 weeks or more among urban CS. This last proportion (88.9%) was the highest among all the population groups shown in the Table 50 with the second highest being for duration of 27-52 weeks among urban CS (71.3%) and third highest among employed urban CS (65.7%) and urban CS in families with highest level of education of SSC+ (64.7%) - all of them among urban CS.

2.20.14 ***Influence of Family Size :*** While the average cost did not differ between families of size 1-6 and 7+ among rural CS, it was somewhat more (Rs.2,214) for urban CS in families of size 7+ compared to those in families of size 1-6 (Rs.2,032). All the four distributions were bimodal. For CS in family size 1-6 in rural areas, the first peak was at cost range of Rs.1-199 and the second peak was at the combined cost range of Rs.600-2,999. For rural CS in family size 7+ and for urban CS with family size 1-6, the first peak was at cost range of Rs.200-599 and the second peak at cost range of Rs.1,000-2,999. Urban CS with family size 7+ had the first peak at cost range of Rs.200-599 and the second peak at cost range of Rs.3,000+. Proportion incurring Rs.1,000 or more was less for rural CS in families of size 1-6 (39.5%) compared to those in family size 7+ (47.0%). Among urban CS, the position was reversed with 56.8% for family size 1-6 and 52.1% for family size 7+.

2.20.15 ***Influence of religion and caste :*** Among rural CS, average cost was somewhat more among SC/ST (Rs.1,594) compared to that for BCs (Rs.1,361) and Other Hindus (Rs.1,397). The highest cost was observed for Other Hindus among urban CS (Rs.3,128) which was much higher than that for SC/ST (Rs.1,988) and BCs (Rs.1,880). But the proportion of CS spending Rs.1,000 or more did not differ between the three urban groups (52.9% to 56.7%). This proportion among rural CS was 39.1% for BCs, 44.5% for SC/ST and 50.0% for Other Hindus. The distributions were bimodal among urban CS for all the three groups and for SC/ST and Other Hindus among rural CS. BCs among rural CS had unimodal distribution with mode at cost range of Rs.1,000-2,999. Out of the five bimodal distributions, four had the second peak at cost range of Rs.1,000-2,999 and one at cost range of Rs.3,000+. The first peak was at cost range of Rs.1-199 for SC/ST and Other Hindus among rural CS and at cost range of Rs.200-599 for all the three urban groups.

Chapter 3

RAICHUR DISTRICT

CHAPTER – 3

RAICHUR DISTRICT

3.1 Profile of Respondents

3.1.1 ***Relationship to Head of Household***: Out of the 3,462 respondents, relationship with the HOH was not stated for four (0.1%). **Among the remaining 3,458 respondents 44.6% were the wives of HOH, 36.6% the HOH himself**, 7.4% son, 4.4% daughter-in-law, 3.5% daughter and 3.5% others. In the rural sample, 38.6% of the respondents were the HOH and 39.9% the wife. The corresponding figures in the urban sample were 34.6% and 49.0% respectively.

3.1.2 ***Age and Sex of Respondent***: Information on sex was available for all the respondents. Of them, 65.9% were females (62.7% in rural and 68.8% in urban samples). Information on age was available for 3,452 (99.7%). Of them, 99.9% were of age 15 or more and 87.8% of age 25 or more. **Respondents of age 25-54 (which has maturity and good memory) formed 71.3%**. There were no differences between rural and urban areas except for respondents of age 25-54 which was 68.5% (rural) and 73.8% (urban). The average age of the respondents was 40.8 years (39.2 for females and 43.7 for males). This difference was observed in both rural and urban areas.

3.1.3 ***Education Status of Respondents***: Information on education status was available for 99.7% of the respondents – (99.6% rural and 99.7% urban). Out of them, 65.3% were illiterate (65.1% rural and 65.9% urban). While 29.0% studied upto Standard IX (i.e. below SSC), 5.6% studied upto the final year of school or had higher education (SSC+). The percentage of respondents with SSC+ was 5.2% in the rural sample compared to 6.7% in the urban sample. This percentage was much higher for male respondents as compared to females in both rural and urban areas. The

relevant figures were : 2.6% for females and 9.6% for males in rural areas and 3.1% and 14.7% respectively in urban areas.

3.2 Population Profile

3.2.1 ***Representativeness of Sample***: Raichur district had a population of about 22,95,000 according to the 1991 census. Of this, 18,19,000 was rural and 4,76,000 urban. The percentage of urban population was less in Raichur (20.7%) compared to Mysore (29.7%). The study population was 20,323 of which 10,058 was from rural areas and 10,265 from urban areas. The age-sex distributions of the census and study populations are given in Table 1A. **The percentage of population in different age - sex groups does not differ much between the census and study populations in both rural and urban areas**. The percentage of males in the study population is almost the same as that in the census population in both rural and urban areas. The relevant figures are: 49.8% (study) and 50.2% (census) in rural areas and 50.5% (study) and 51.5% (census) in urban areas. Thus, the study sample represents the population of Raichur district in the above respects.

3.2.2 ***Education Status***: Education status was available for 99.9% of the study population. Those below 7 years of age formed 17.0%. Among the others, 40.3% were illiterates (29.9% among males and 50.7% among females). **Illiterates formed the same proportion in rural and urban areas (about 40.0%)**. Illiteracy was higher among rural and urban females (about 50%) compared to rural and urban males (about 30%). Those who had studied below SSC formed 30.0% (29.5% rural and 31.2% urban). SSC+ was attained by 12.7% (12.9% rural and 12.1% urban). This level of education was achieved by only 7.4% females compared to 17.9% males.

Table 1A

Distribution of census and study populations by sex and age in rural and urban areas (Raichur District).

Age	Males				Females			
	Census (1991)		Study (1997)		Census (1991)		Study (1997)	
	No. (000s)	%	No.	%	No. (000s)	%	No.	%
1	2	3	4	5	6	7	8	9
Rural								
0 – 4	132	*14.5*	576	*11.5*	128	*14.2*	585	*11.6*
5 – 14	251	*27.5*	1,297	*25.9*	245	*27.1*	1,284	*25.5*
15 – 24	152	*16.6*	958	*19.1*	142	*15.7*	928	*18.4*
25 – 34	128	*14.0*	761	*15.2*	137	*15.2*	805	*16.0*
35 – 44	104	*11.4*	585	*11.7*	98	*10.8*	542	*10.8*
45 – 54	75	*8.2*	417	*8.3*	72	*8.0*	405	*8.0*
55 – 64	44	*4.8*	256	*5.1*	46	*5.1*	262	*5.2*
65+	27	*3.0*	162	*3.2*	36	*4.0*	228	*4.5*
NS	7	*0.7*	2	-	4	*0.5*	5	*0.1*
Total	**914**		**5,014**		**905**		**5,044**	
Urban								
0 – 4	30	*12.3*	676	*13.0*	30	*12.9*	604	*11.9*
5 – 14	65	*26.7*	1,444	*27.9*	62	*26.6*	1,301	*25.6*
15 – 24	46	*18.9*	873	*16.9*	44	*18.9*	990	*19.5*
25 – 34	36	*14.8*	760	*14.7*	37	*15.9*	822	*16.2*
35 – 44	30	*12.3*	644	*12.4*	25	*10.7*	621	*12.2*
45 – 54	20	*8.2*	417	*8.0*	17	*7.3*	331	*6.5*
55 – 64	10	*4.1*	207	*4.0*	11	*4.7*	249	*4.9*
65+	6	*2.5*	160	*3.1*	7	*3.0*	166	*3.3*
NS	3	*1.1*			2	*0.8*		
Total	**484**		**5,181**		**456**		**5,084**	

NS – Not stated

Note : Percentages in different age groups are calculated out of the number of persons for whom age has been stated.

3.2.3 ***Occupation***: Information on occupation was collected from 99.9% of the study population. The age group of 0-5 years (14.4%), students and school drop outs in the age group of 6-14 years (23.4%) and housewives (19.0%) together formed 56.7% - 56.0% in rural areas and 58.3% in urban areas. In rural areas, persons engaged in agriculture and allied work (19.0%), business and allied HH industry (5.8%), unskilled labour (4.4%) and skilled labour (3.7%) formed the bulk of those engaged in productive activities. About one-fifth was unemployed. Out of 6-14 age group, 11.2% were working. In urban areas, unskilled workers formed 9.5%, skilled workers 8.3%, those engaged in business and allied household industry 7.1% and agriculture and allied work 6.7%. Among rural females of age 15 or more, 57.1% were housewives only, 16.0% doing agricultural labour, 4.8% students, 3.7% engaged in own cultivation, 2.9% housewife-cum-workers and 7.7% unemployed. In urban areas, 59.9% of females of age 15 or more were houswives, 10.1% general labourers, 9.9% agricultural labourers, 4.3% students, 3.8% owning petty shop or business and 6.5% unemployed. Out of 6-14 age group 7.8% were working.

3.3 Household Profile

3.3.1 ***Religion and Caste***: Information on religion and caste was obtained for all HHs except one rural HH. The highest proportion was for SC/ST (35.1%) followed by BCs (27.6%), Other Hindus (20.5%) and Muslims (16.4%). SC/ST, BCs and Other Hindus together formed 83.2% of the HHs (84.1% rural and 81.2% urban). While SC/ST were more in urban areas. (40.7%) compared to rural areas (32.7%), Other Hindus were more in rural areas (22.9%) compared to urban areas (15.0%).

3.3.2 ***Type of Family***: All the HHs could be classified into three types of families. Majority were nuclear families (husband, wife and children) (55.8%), this proportion being higher in urban areas (58.9%) compared to rural areas (54.5%). Joint families (which also included parents, brothers, sisters and children's family) were more in rural areas (37.5%) compared

to urban areas (32.0%). Extended families (with addition of the families of brothers, sisters, uncles etc) formed only 8.3% of the total HHs (8.0% rural and 9.1% urban). **HHs with chest symptomatics (CS HHs) had more joint families (60.2%) compared to HHs without a chest symptomatic (34.7%). This was observed in both rural and urban areas**. The respective figures were : 63.8% and 36.1% rural and 51.7% and 31.3% urban.

3.3.3 ***Education Status of HOH***: Information on the education status of the head of the HH (HOH) could be ascertained from the data for 99.9% of the HHs (99.9% each for rural and urban). Out of them, 59.4% were illiterate (60.1% rural and 57.6% urban). While 25.7% studied below SSC, 14.9% studied upto final year of school or had higher education. Percentage of HOH who were SSC+ was 13.8 in rural areas as compared to 17.6 in urban areas. **This percentage steadily increased from 4.8 in CS HHs to 13.6 in non-CS sick HHs and to 20.6 in non-sick HHs in rural areas and from 6.7 to 17.7 and to 22.4 respectively in urban areas**. The education status of the HOH seems to have a positive effect on health of the HH. This seems to influence the type of sickness also, if CS HHs could be considered to be more unhealthy than non-CS sick HHs.

3.3.4 ***Highest Education Level in HH***: The highest education level attained by members of the HH was ascertained from the data for all the HHs. There were only illiterates in 20.2% of the HHs, this percentage being (20.7%) in rural areas and 19.0 in urban areas. The percentage of HHs which had persons who studied upto Standard IX or less (below SSC) and final year of school or beyond final year (SSC+) was 43.5 and 36.4 respectively. **Percentage of HHs with highest level of SSC+ steadily increased from 30.4 in CS HHs to 36.0 in non-CS sick HHs and to 44.3 in non-sick HHs in rural areas**. In urban areas, this percentage showed the same trend but the increase from non-CS sick HHs to non-sick HHs was too small. The relevant percentages were 24.5, 36.6 and 37.8

respectively. This indicates a possible positive effect of the highest education level of the HH on the health of the HH.

3.3.5 ***Family Size*** : The distribution of all HHs and CS HHs according to family size in rural and urban areas is given in Table 2A. **Percentage of CS HHs out of all HHs increased steadily with the size of the family in both rural and urban areas (except for a higher percentage in families with 1-3 members in rural areas)**. The percentage of non-sick HHs showed the opposite pattern of decrease for families of all sizes without any exception. Percentage of non-CS sick HHs showed a pattern of increase for urban areas but not for rural areas. The mean size of family was highest for CS HHs (6.4) followed by non-CS sick HHs (5.8) and non-sick HHs (4.8) and showed a decreasing trend in size of the family for the three types of HHs. The mean values were nearly the same in both rural and urban areas.

3.3.6 ***Number of Females in HH*** **:** Similarly, the percentage of CS HHs out of all HHs increased steadily with the number of females in the HH in rural and urban areas with one exception each. The relevant figures are : 5.3% for 0-1 female, 5.0% for 2-3 females, 7.4% for 4-5 females and 13.5% for 6 or more females in rural areas and 5.6%, 6.9%, 7.1% and 5.5% respectively in urban areas. Percentage of non-CS sick HHs out of all HHs also showed the same increasing trend in rural and urban areas with one exception viz., a drop in percentage for rural families with 6 or more female members. The ranges in percentages – 77.9% to 85.7% (rural) and 75.1% to 87.3% (urban) – were small, particularly for rural areas. Consequently, the percentage of non-sick HHs out of all HHs showed a clear and steady decreasing trend in rural and urban areas. The range in percentage was from 16.8% to 2.1% (rural) and 19.2% to 7.3% (urban). Average number of females in the HH decreased from 3.5 for CS HHs to 3.1 for non-CS sick HHS and to 2.4 in non-sick HHs, in rural areas.

Table 2A

Distribution of different types of HHs according to family size in rural and urban areas (Raichur district)

Type of HHs	No. of persons in the HH				Total
	1 – 3	4 – 6	7 – 9	10+	
(1)	(2)	(3)	(4)	(5)	(6)
Rural					
1. No. of HHs	282	822	401	165	1,670
2. CS HHs					
a) No.	15	38	35	17	105
b) Percentage	*5.3*	*4.6*	*8.7*	*10.3*	*6.3*
3. Non – CS sick HHs					
a). No.	216	693	340	140	1,389
b). Percentage	*76.6*	*84.3*	*84.8*	*84.8*	*83.2*
4. Non – sick HHS					
a). No.	51	91	26	8	176
b). Percentage	*18.1*	*11.1*	*6.5*	*4.8*	*10.5*
Urban					
1. No. of HHs	303	956	390	143	1,792
2. CS HHs					
a). No.	11	65	30	12	118
b). Percentage	*3.6*	*6.8*	*7.7*	*8.4*	*6.6*
3. Non – CS sick HHs					
a). No.	219	758	322	121	1,420
b). Percentage	*72.3*	*79.3*	*82.6*	*84.6*	*79.2*
4. Non – sick HHs					
a). No.	73	133	38	10	254
b). Percentage	*24.1*	*13.9*	*9.7*	*7.0*	*14.2*

3.3.7 ***Number of Persons of Age 15 or more in HH*** : Similar trends were observed for proportion of CS HHs out of all HHs with increase in the number of persons of age 15 years or more (15+). The relevant figures are : 4.1% for HHs with 1-2 persons of age 15+, 4.5% for those with 3-4 such persons, 10.3% for HHs with 5-6 persons and 13.2% for HHs with 7 or more such persons, in rural areas and 4.5%, 7.8%, 9.2% and 5.6% respectively in urban areas. There was no such pattern for percentage of non-CS sick HHs. Percentage of non-sick HHs out of all HHs decreased steadily. The relevant figures are : 12.1% for HHs with 1-2 persons of age 15+, 11.6% for HHs with 3-4 persons, 8.8% for HHs with 5-6 persons and 4.4% for HHs with 7 or more persons, in rural areas and 15.2%, 14.2%, 12.6% and 11.9% respectively in urban areas. Average number of persons of age 15+ decreased steadily from 4.0 for CS HHs to 3.1 for non-CS sick HHs and to 2.7 for non-sick HHs in rural areas and from 3.2 to 2.8 and to 2.7 respectively in urban areas.

3.3.8 ***Number of Females of Age 15 or more*** : The pattern was similar for the percentages of CS HHs and non-sick HHs out of all HHs with increase in the number of females of age 15+ in the HH in both rural and urban areas. The relevant figures are : (a) for CS HHs, 4.7% for HHs with 0-1 female of age 15+, 6.8% for those with 2 females, 8.4% with 3 females and 10.6% with 4 or more females, and (b) for non-sick HHs 13.5%, 10.8%, 10.9% and 5.7% respectively, with one exception viz., no decrease for those with 3 females of age 15+. Average number of females of age 15+ decreased steadily from 2.2 for CS HHs to 1.9 for non-CS sick HHs and to 1.6 for non-sick HHs in rural areas.

3.3.9 ***Number of Children below six years and number of dependent persons :*** The percentage of CS HHs out of all HHs did not show any pattern with increase in number of children of age below 6 years. But, percentage of non-sick HHs out of all HHs showed a decreasing trend in rural and urban areas. The relevant figures were : 13.6% for no such child,

9.5% for one such child, 6.3% for 2 such children and 3.6% for 3 or more of such children in rural areas and 17.7%, 14.0%, 8.9% and 5.0% respectively in urban areas. Percentages of CS HHs and non-sick HHs out of all HHs showed similar patterns as for number of children below six years viz., no trend for percentage of CS HHs and a decreasing trend for percentage of non-sick HHs, in rural and urban areas.

3.3.10 ***Occupation*** : As expected, the main type of work of the HH was agricultural work (including dairy and sericulture also) in the rural areas with 49.6% being so engaged. Next came business with 20.3% and coolie (labourer) with 13.1%. In the urban areas, the main type of work of the HH which was most frequent was coolie (38.2%) followed by business (25.1%), agricultural work (16.2%) and office work (12.6%). The difference between the three types of HHs were small. The exceptions were : (a) in rural areas, proportion engaged in business was less among CS HHs (12.4%) compared to about 20% among the other two types of HHs, (b) in urban areas, proportion working as collie was less among CS HHs (25.4%) compared to about 40% among the other two types of families and (c) in rural and urban areas, proportion engaged in agriculture decreased from CS HHs to non-CS sick HHs and to non-sick HHs.

3.3.11 ***Earning Members*** : Only 1.0% of the HHs did not have any earning member (1.1% rural and 0.6% urban). HHs with one earning member formed 35.8% followed by 2 earning members (29.1%) and 3 earning members (18.1%). The average number of earning members per HH was 2.1 in urban areas and 2.3 in rural areas. This was due to the single earning member HHs being more in urban areas (41.3%) as against 33.4% in rural areas. **Average number of earning members per HH was 2.5 for CS HHs, 2.2 for non-CS sick HHs and 1.9 for non-sick HHs**. The corresponding figures were: 2.7, 2.3 and 1.8 respectively in rural areas and 2.0 each for all the categories of HHs in urban areas. The overall mean was 2.2 (2.3 rural and 2.1 urban)

3.3.12 ***Earning Female Members :*** Households without earning female members were slightly more in urban areas (60.3%) compared to 56.6% in rural areas, the overall proportion being 57.7%. Next in frequency were HHs with one earning female member (28.8%) followed by 2 earning female members (10.1%). The average number of female earning members per HH was 0.6 (0.6 rural and 0.5 urban). This average in rural areas was 0.7 each in CS HHs and non – CS sick HHs and 0.4 in non-sick HHs. The respective figures in urban areas were 0.6, 0.6 and 0.4.

3.4 Sickness in Household

3.4.1 ***Sick Persons*** : **There was atleast one chest symptomatic (CS) in 6.3% of HHs**. While 82.1% of HHs had sick persons (SPs) without chest symptoms, 11.6% had no SP. Percentage of HHs with CS was same in rural areas (6.3%) and urban areas (6.6%). Non-sick HHs (i.e., without a SP) were 10.5% in the rural sample as against 14.2% in the urban sample.

3.4.2 ***SPs in different types of HH*** : The proportion of HHs with at least one SP was 88.4%. Out of these, 58.5% had only one SP in the HH, 30.8% two SPs and 8.0% three SPs which together accounted for 97.3% of the total. Proportion of HHs with one SP was less in rural areas (55.8%) compared to urban areas (64.8%). Consequently, two or more SPs were more common in rural HHs. Among the CS HHs, 54.5% had only one SP, 32.5% two SPs and 8.9% three SPs. The corresponding figures for non-CS sick HHs were : 58.9%, 30.6% and 8.0% respectively. The proportion of single SP HHs among CS HHs was 52.4% in rural areas compared to 59.3% in the urban areas. The corresponding figures for non-CS sick HHs were higher : 56.1% and 65.3% respectively. The average number of sick persons was 1.6 in CS HHs and 1.5 in non-CS sick HHs.

3.4.3 ***Female SPs*** : Among the 3,032 sick HHs, 38.4% had no female SP, 55.0% one female SP and 12.7% two female SPs. Among the CS HHs, 37.9% had no female SP, 49.2% one female SP and 11.0% two female SPs. The corresponding figures for non-CS sick HHs were : 29.8%, 55.4% and 12.8% respectively. Urban-rural differences in the above percentages were small. However the proportion of single female SP HHs among CS HHs was 51.4% in the rural sample as compared to the urban sample (44.1%). The corresponding figures for non-CS sick HHs were 55.1% and 56.2% respectively. The higher proportion of HHs without female SP among CS HHs (37.9%) compared to that in non-CS sick HHs (29.8%) shows that **sickness among females was less in CS HHs. The above difference was found in both rural and urban areas**, it being larger in the latter (44.1% vs 32.4%). The average number of female SPs was 0.8 in CS HHs and 0.9 in non-CS sick HHs.

3.4.4 ***SPs of age 15 or more*** : Among the sick HHs, 17.8% did not have any SP of age 15 or more (16.8% rural and 20.2% urban). Proportion of sick HHs which had one SP of age 15 or more was 60.8% and that with two SPs of age 15 or more was 17.8%. Among CS HHs, the proportion with one SP of age 15 or more was 61.8%, with two SPs 31.7% and with three SPs 6.5%. In non-CS sick HHs, the corresponding figures were 60.7%, 16.7% and 2.5% respectively. Proportion with two SPs of age 15+ among CS HHs (31.7%) was almost double of that in non-CS sick HHs (16.7%), this being mainly due to the higher proportion of 33.3% among CS HHs compared to 18.0% for non-CS sick HHs. Proportion of CS HHs with one SP of age 15+ was less in rural areas (58.1%) compared to urban areas (70.3%). Other percentages given above did not differ much between rural and urban areas. The average number of SPs of age 15 or more was higher in CS HHs (1.4) compared to that in non-CS sick HHs (1.1). This difference was observed in both areas – 1.5 and 1.1 (rural) and 1.3 and 0.9 (urban).

3.4.5 ***Female SPs of age 15 or more*** : There was no female SP of age 15 or more in 43.6% of the sick HHs. This proportion was 42.6% in rural areas and 46.1% in urban areas. The percentage of sick HHs with one female SP of age 15 or more was 50.2 (50.4 rural and 49.8 urban). The pattern was similar in both CS and non-CS sick HHs. The average number of female SPs of age 15 or more was 0.7 in CS HHs and 0.6 in non-CS sick HHs.

3.4.6 ***Number of CS in HH*** : **Out of the CS HHs, 98.8% had only one CS** and the remaining 1.2% two CS in the HH. The average number of CS per HH was only marginally more than one (1.01). The pattern was similar in both rural and urban areas.

3.4.7 ***Number of Female CS in HH*** : **Among the CS HHs, 60.5% did not have a female CS** and the remaining 39.5% had one female CS. Percentage of CS HHs without female CS was less in rural areas (58.1) compared to urban areas (66.1). The average number of female CS in the CS HHs was 0.4 in rural areas and 0.3 in urban areas.

3.5 Prevalence of Sickness

3.5.1 ***Prevalence during last six months*** : Information about persons who were sick at any time during the past six months (SPs) was collected from each HH. Proportion of sick persons in the population was 23.2% (23.9% rural and 21.6% urban). **Prevalence of sickness was more among females** (25.7%) as compared to males (20.7%). Those who had cough, upper respiratory infection and breathing problems formed 9.2% and those who had cough (alone or in combination with other related symptoms) formed 5.1% (5.2% rural and 5.0% urban). Persons having cough along with fever, or chest pain or blood in sputum were 3.8% (3.9% rural and 3.7% urban). Cough of duration more than three weeks formed 1.2% (1.1% rural and 1.3% urban). Those who had productive cough also (i.e., chest symptomatics (CS) as defined under RNTCP) were 1.1%.

(1.1% rural and 1.2% urban). **The prevalence of CS was 1.4% among males and 0.9% among females**. This sex difference in prevalence was less pronounced in rural areas (1.3% for males and 0.9% for females) compared to urban areas (1.5% for males and 0.8% for females). The number of CS were 226 of which 106 were in rural areas and 120 in urban areas. Of the 226 CS, 141 (62.4%) were males and 85 (37.6%) females.

3.5.2 ***Main Groups of Symptoms*** : On the basis of the reported symptoms, five groups with similar symptoms were formed. Thus, of the 4,620 sick persons, 1,845 (39.9%) had cough, upper respiratory infection (URI) or breathing problems, 1,194 (25.8%) had fever, 672 (14.5%) diarrhoea or other abdominal problems, 492 (10.6%) general problems such as pains and aches and 417 (9.0%) other symptoms/health problems.

3.5.3 ***Prevalence rate for Cough*** : Age-sex prevalence rates were calculated for the first four of the five groups (which together formed 91.0% of the sick persons) (Table 3A). **The cough group generally had higher prevalence in older age groups. This trend was more prominent among rural males, with a steady and substantial increase** from 6.3% for 15-24 years to 29.0% for 65+ years. Among rural and urban females and urban males, the prevalence rates were comparatively smaller generally in the older age groups and the increasing trend was not so prominent. For all the four groups (rural/urban and male/female), prevalence rate decreased with age from 0-4 age group to 15-24 age group and thereafter increased upto 55-64 age group for rural and urban females and upto 65+ age group for rural and urban males. Urban males and females had a high prevalence rate in the 0-4 age group and to a lesser extent in the 5-14 age group.

3.5.4 ***Prevalence rate for Fever*** : The prevalence rates for the fever group were consistently higher for females compared to males in all age groups except 5-14 and 55-64 age groups in rural areas and for all age groups

Table 3A
Prevalence rate for certain groups of sickness in different age – sex groups
(Raichur district)

Sickness group sex and residence	Prevalence rate (%) in age group								
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. **Cough, upper respiratory and breathing problems**									
Rural : Males	10.4	7.0	6.3	7.1	8.5	13.7	19.9	29.0	9.4
Females	10.4	7.6	5.5	8.6	11.8	12.8	16.0	13.2	9.2
Urban : Males	12.4	7.3	4.1	6.6	9.3	10.6	17.4	20.6	8.6
Females	12.1	6.3	5.6	8.0	10.6	15.7	18.5	12.0	9.0
Rural : M & F	10.4	7.3	5.9	7.9	10.1	13.3	18.0	19.7	9.3
Urban : M & F	12.3	6.8	4.9	7.3	10.0	12.8	18.0	16.3	8.8
2. **Fevers**									
Rural : Males	4.7	5.0	5.5	4.1	4.8	6.2	8.2	4.3	5.1
Females	7.2	4.5	6.0	9.6	10.5	10.6	7.6	10.5	7.5
Urban : Males	5.5	4.5	3.4	4.3	3.7	4.8	5.3	3.1	4.3
Females	4.6	3.6	5.2	8.4	11.8	8.2	7.6	11.4	6.5
Rural : M & F	5.9	4.8	5.8	6.9	7.5	8.4	7.9	7.9	6.3
Urban : M & F	5.1	4.1	4.3	6.4	7.7	6.3	6.6	7.4	5.4
3. ***General Problems***									
Rural : Males	0.5	0.5	0.9	3.3	3.4	1.9	4.7	4.9	1.8
Females	0.0	0.9	2.0	3.2	5.7	8.9	8.0	9.2	3.3
Urban : Males	0.6	0.2	1.6	1.7	2.5	3.6	3.4	7.5	1.6
Females	0.3	0.8	1.5	2.9	6.1	7.6	8.8	8.4	3.0
Rural : M & F	0.3	0.7	1.5	3.3	4.5	5.4	6.4	7.4	2.5
Urban : M & F	0.5	0.5	1.6	2.3	4.3	5.3	6.4	8.0	2.3
4. **Diarrhoca & other abdominal problems**									
Rural : Males	5.6	2.8	1.9	2.8	2.9	1.9	2.7	3.1	2.9
Females	6.0	2.6	4.3	6.2	5.9	3.0	2.7	1.8	4.2
Urban : Males	4.7	1.9	1.0	2.9	2.6	3.1	3.4	1.2	2.5
Females	3.6	1.8	3.7	5.7	5.0	3.6	2.4	3.6	3.6
Rural : M & F	5.8	2.7	3.1	4.5	4.3	2.4	2.7	2.3	3.6
Urban : M & F	4.2	1.9	2.5	4.4	3.8	3.3	2.9	2.5	3.1

after 15 years in urban areas. **Prevalence rate was higher in rural areas compared to urban areas for all the age groups except 35-44 years.**

3.5.5 ***Prevalence rate for general problems and Diarrhoea*** : The **prevalence rates for general problems were substantially higher among females as compared to males in all the age groups after 35 years in rural and urban areas**. This rate was **consistently higher in the rural areas** as compared to urban areas in all age groups after 25 years. The **prevalence rate for the Diarrhoea group was consistently higher in rural areas** as compared to urban areas for all age groups upto 44 years and thereafter consistently lower for the remaining three age groups.

3.5.6 ***Prevalence of cough and other symptoms by Sex :*** Comparison of prevalence rates for cough (CO) and other sickness (OS) for different groups of population in rural and urban areas (Table 4A) shows some interesting findings. **While prevalence rate for cough (CO) was more among males compared to females in both rural and urban areas, it was the reverse for other symptoms (OS).**

3.5.7 ***Prevalence of CO and OS by Age :*** Prevalence rate for both CO and OS in rural and urban areas showed an initial decline with age followed by a steady increase with age. The only exceptions were a drop in the urban rate for (a) 65+ age group for CO and (b) 45-54 age group for OS. In both rural and urban areas, the dip in rate was in age group (a) 15-24 for CO and (b) 5-14 for OS. Rural-urban differences in both the prevalence rates were small. **Another interesting finding** (not shown in the Table) **is that the percentage of persons with cough for more than three weeks out of those having cough generally increased with age**. The relevant figures are : 1.4% for (0-4), 8.0% for (5-14), 8.2% for (15-24), 14.0% for (25-34), 14.3% for (35-44), 41.7% for (45-54), 41.8% for (55-64) and 50.0% for (65+) in rural areas and 3.3%, 11.1%, 16.0%, 23.2%, 34.4%,

Table 4A

Prevalence rates for cough (CO) and other symptoms (OS) in different population groups (Raichur district)

Population groups	Rural			Urban		
	Population (all ages)	Prevalence rate (%)		Population (all ages)	Prevalence rate (%)	
		CO	OS		CO	OS
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. **Total**	10,058	*5.2*	*18.6*	10,265	*5.0*	*16.6*
2. **Sex** : Female	5,044	*5.1*	*21.3*	5,084	*4.7*	*19.4*
Male	5,014	*5.4*	*16.0*	5,181	*5.3*	*13.9*
3. **Age** :						
0 – 4	1,161	*6.0*	*17.9*	1,280	*7.1*	*16.4*
5 – 14	2,581	*3.4*	*13.6*	2,745	*3.3*	*12.0*
15 – 24	1,886	*3.2*	*14.2*	1,863	*2.7*	*12.1*
25 – 34	1,566	*3.6*	*20.9*	1,582	*4.4*	*17.4*
35 – 44	1,127	*5.0*	*23.9*	1,265	*5.1*	*22.6*
45 – 54	822	*8.8*	*24.2*	748	*8.3*	*22.1*
55 – 64	518	*12.9*	*26.3*	456	*11.6*	*26.1*
65+	390	*14.4*	*29.2*	326	*11.0*	*28.8*
4. **Type of family**						
Nuclear	4,372	*5.1*	*21.7*	4,956	*5.4*	*19.1*
Joint	4,289	*5.5*	*17.3*	3,605	*5.5*	*14.9*
Extended	1,397	*4.7*	*13.4*	1,704	*2.8*	*13.1*
5. **Family Size**						
1 – 3	708	*8.1*	*30.9*	780	*7.2*	*26.5*
4 – 6	4,142	*5.1*	*21.2*	4,741	*5.5*	*18.0*
7 – 9	3,114	*5.3*	*16.0*	3,002	*4.6*	*14.4*
10+	2,094	*4.4*	*13.4*	1,742	*3.3*	*12.3*
6. **No. of females in HH**						
0 – 1	910	*6.7*	*25.5*	1,171	*6.8*	*22.5*
2 – 3	4,502	*5.2*	*20.8*	4.931	*5.4*	*17.3*
4 – 5	2,909	*5.0*	*16.3*	2,872	*4.4*	*14.9*
6+	1,737	*5.1*	*13.4*	1,291	*3.5*	*12.2*
7. **Education**						
Illiterate	4,064	*6.5*	*21.9*	4,102	*5.9*	*20.1*
Below SSC	2,956	*4.6*	*16.9*	3,206	*3.6*	*14.0*
SSC +	1,300	*2.5*	*15.0*	1,242	*3.0*	*13.4*
8. **Religion & caste** :						
SC/ST	3,171	*5.6*	*19.9*	4,223	*5.3*	*17.4*
BCs	2,929	*5.2*	*18.7*	2,549	*4.7*	*15.5*
Other Hindus	2,295	*4.7*	*17.1*	1,380	*4.8*	*16.4*
Muslims	1,653	*5.4*	*18.2*	2,006	*5.2*	*16.6*
Other	6	*NC*	*NC*	107	*1.9*	*15.0*

(1)	(2)	(3)	(4)	(5)	(6)	(7)
9. **Occupation** :						
A: a). Unemployed	433	13.2	27.0	399	10.0	24.1
b). Students (age 15+)	2,006	3.4	13.1	2,015	3.1	11.5
Sub Total	**2,439**	**5.2**	**15.5**	**2,414**	**4.2**	**13.5**
B: a). Housewives	1,812	4.9	22.6	1,905	4.6	22.9
b). Housewife cum workers	92	6.5	30.4	51	9.8	23.5
Sub Total	**1,904**	**5.0**	**23.0**	**1,956**	**4.8**	**23.0**
C: Employed – Labour :						
a). Skilled	370	4.6	17.0	856	4.8	11.9
b). Unskilled	445	7.6	20.4	971	5.8	19.3
Sub - Total	**815**	**6.3**	**18.9**	**1,827**	**5.3**	**15.8**
D: Employed – others :						
a). Agriculture & allied work	1,913	6.1	21.9	687	6.1	20.2
b). Business & allied HH Industry	581	4.8	18.2	725	5.8	15.4
c). Others	223	2.2	14.8	285	3.9	16.1
Sub - Total	**2,717**	**5.5**	**20.5**	**1,697**	**5.6**	**17.5**
E: All employed	3,532	5.7	20.1	3,524	5.3	16.6

NC – Not Calculated because of small numbers

41.9%, 56.6% and 50.0% respectively in urban areas. **Thus, in the age groups with higher and higher prevalence rates for cough, the percentage having cough for more than three weeks also increased leading to larger and larger number of persons with cough for more than three weeks with increase in age**. This was so in both rural and urban areas.

3.5.8 ***Prevalence of CO and OS by type of Family, Family size and number of Females in HH :*** Prevalence rates (rural and urban for OS) were highest for nuclear families followed by joint families and extended families (least). Similarly, all the four rates decreased steadily with increase in family size and in number of females in the family. The only exception was prevalence rate for CO in rural families with 7-9 members. **Surprisingly, the prevalence rates for CO and OS were least in the largest families and those with the maximum number of females in the family**, the latter possibly being a reflection of large family size. The difference in rates between the types of families mentioned earlier may also be due to increase in family size.

3.5.9 ***Prevalence of CO and OS*** : ***By Education Status*** : **Prevalence rates in rural and urban areas for CO and OS showed a steady decline with increase in the level of education**. Rural-urban differences in both prevalence rates according to education status were either small or negligible.

3.5.10 ***Prevalence of CO and OS : By Religion and Caste:*** Differences in prevalence rates for CO between the religion and caste groups and between rural and urban areas were small. This was so for prevalence rates for OS also.

3.5.11 ***Prevalence of CO and OS : By Occupation*** : Prevalence rate for CO in rural and urban areas was highest among unemployed (13.2% and 10.0% respectively). In rural areas, unskilled labour came second (7.6%) and housewife-cum-worker third (6.5%). In urban areas, house-wife-cum-worker came second (9.8%). Students had the lowest prevalence rate in rural and urban areas (3.4% and 3.1% respectively). The prevalence rate for OS in rural areas was highest among housewives – cum – workers (30.4%) followed by unemployed (27.0%) and housewives (22.6%). Prevalence rate for these three groups did not differ in urban areas and had the highest rates (22.9% to 24.1%). It was least among students in rural and In urban areas (13.1% and 11.5% respectively). Overall, another group which had low prevalence rate was skilled labour. Unskilled labour generally had high rates.

3.6 Duration of Sickness

3.6.1 ***Duration of Sickness in Rural and Urban Areas*** : Information on duration of sickness was available for all the SPs in rural and urban areas. Among them, duration was less than 8 days for 62.5%, 8-14 days for 6.6%, 15-21 days for 3.7%, 22-28 days for 7.1% and 29 days or more for 20.2%. The corresponding figures for urban areas were 59.8%, 7.3%, 4.3%, 6.0% and 22.6% respectively. The pattern was similar in both rural and urban areas and differences in the percentages were small or negligible. **It is significant that about 70.0% of SPs with sickness for 29 days or more in fact had sickness for 181 days or more**.

3.6.2 ***Duration of Sickness : By Main Groups*** : Table 5A shows the duration of sickness for persons with four main groups of symptoms. **For all the four groups in both rural and urban areas two peaks are evident. The first peak is invariably for symptoms of less than 8 days duration and the other generally for symptoms of 29 days or more**. The proportion of persons with symptoms of duration 8-14 days, 15-21 days and 22-28 days was quite small (varying from 2.3% to 14.0%). The first peak had the

Table 5A

Duration of sickness for persons with four main groups of symptoms (Raichur district)

Symptom group		Duration of sickness (in days)					Sick Persons
		< 8	8 – 14	15 – 21	22 – 28	29 +	
(1)		(2)	(3)	(4)	(5)	(6)	(7)
Rural							
Cough	No.	657	79	22	23	156	937
	%	*70.1*	*8.4*	*2.3*	*2.5*	*16.6*	
Fevers	No.	511	44	25	34	22	636
	%	*80.3*	*6.9*	*3.9*	*5.3*	*3.5*	
Diarrhoea :	No.	233	15	9	48	53	358
	%	*65.1*	*4.2*	*2.5*	*13.4*	*14.8*	
General problems	No.	61	10	19	36	131	257
	%	*23.7*	*3.9*	*7.4*	*14.0*	*51.0*	
Urban							
Cough :	No.	580	91	24	18	195	908
	%	*63.9*	*10.0*	*2.6*	*2.0*	*21.5*	
Fevers :	No.	462	33	23	18	22	558
	%	*82.8*	*5.9*	*4.1*	*3.2*	*3.9*	
Diarrhoea :	No.	193	12	11	34	64	314
	%	*61.5*	*3.8*	*3.5*	*10.8*	*20.4*	
General problems	No.	58	12	14	31	120	235
	%	*24.7*	*5.1*	*6.0*	*13.2*	*51.1*	

highest frequencies in both rural and urban areas for fever group (over 80%) followed by cough (64% to 70%) and diarrhoea (61% to 65%). General problems had the lowest frequencies (24% to 25%). Proportion having cough was more in rural areas (70.1%) compared to urban areas (63.9%). **Duration of 29+ days, which probably indicates the start of chronic sickness, was negligible for the fever group** – 3.5% (rural) and 3.9% (urban) **but showed somewhat higher frequencies for the cough and diarrhoea groups** (15% to 21%). Both had higher frequencies in urban areas compared to rural areas. These indicate substantial proportion with chronic sickness in these two groups. The last group had the highest frequencies for duration of 29+ days (about 51% each in rural and urban areas) indicating that chronic sickness may be much more for those with general problems like aches and pains. The proportion of persons reporting duration of less than 8 days was the lowest for general problems. The vast majority of persons reporting duration of 29+ days for each of the four groups of symptoms actually had duration of 90 days or more, for all except fever 181 days or more.

3.7 <u>Action taken by sick persons (all HHs)</u>

3.7.1 ***Action taken by Rural SPs : By Type of Sick HH*** : Action taken when someone was sick during the last six months in different types of sick HHs in rural areas is shown in Table 6A. This information was available for all HHs. While 1.6% did not take any action, 1.9% did not consult any health facility (purchased and took drugs, had traditional / home remedy, etc). **The remaining 96.5% (almost same among CS and non-CS sick HHs) contacted some health facility, some of them contacting more than one. Those consulting only primary level facilities (PMP and PHC) formed 90.5%.** This proportion was less among CS HHs (81.9%) compared to non-CS HHs (91.1%). Direct use of secondary level facilities alone was so small by CS HHs (1.9%) and non-CS HHs (3.0%). The net result was that those consulting both primary and secondary level services were more among CS HHs (11.4%) compared to non-CS HHs (2.4%).

Table 6A
Action taken by HHs when some was sick during the last six months in rural Raichur, by type of HH.

Health facility contacted	Sick HHs					
	CS		Non - CS		Total	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. **No action**	5	*4.8*	19	*1.4*	24	*1.6*
2. **Action without medical consultation**	0	*0.0*	28	*2.0*	28	*1.9*
3. **Primary level**						
a) PMP	81	*77.1*	1,231	*88.6*	1,312	*87.8*
b) PHC	0	*0.0*	17	*1.2*	17	*1.1*
c) PMP & PHC	3	*2.9*	15	*1.1*	18	*1.2*
d) Others	2	*1.9*	0	*0.0*	2	*0.1*
e) PMP & Others	0	*0.0*	3	*0.2*	3	*0.3*
Sub – total	**86**	***81.9***	**1,266**	***91.1***	**1,352**	***90.5***
4. **Secondary level**						
a) GH	1	*1.0*	35	*2.5*	36	*2.4*
b) NGH	0	*0.0*	7	*0.5*	7	*0.5*
c) GH & NGH	1	*1.0*	0	*0.0*	1	*0.1*
d) NGH & Santorium	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**2**	***1.9***	**42**	***3.0***	**44**	***2.9***
5. **Primary & Secondary level**						
a) PMP & GH	7	*6.7*	30	*2.2*	37	*2.5*
b) PMP& NGH	1	*1.0*	3	*0.2*	4	*0.3*
c) PMP & sanatorium	2	*1.9*	0	*0.0*	2	*0.1*
d) PMP & 2 other facilities	2	*1.9*	0	*0.0*	2	*0.1*
e) PHC & GH	0	*0.0*	0	*0.0*	0	*0.0*
f) PHC & NGH	0	*0.0*	0	*0.0*	0	*0.0*
g) Others & GH	0	*0.0*	1	*0.1*	1	*0.1*
Sub - total	**12**	***11.4***	**34**	***2.4***	**46**	***3.1***
6. **Other combinations (mostly 3 or more facilities)**	0	*0.0*	0	*0.0*	0	*0.0*
7. Not stated	0	*0.0*	0	*0.0*	0	*0.0*
Total	**165**		**1,389**		**1,494**	
Total contribution (alone or in combination) by						
a) PMP	96	*91.4*	1,282	*92.3*	1,378	*92.2*
b) PHC	3	*2.9*	32	*2.3*	35	*2.3*
c) GH	9	*8.6*	66	*4.8*	75	*5.0*
d) NGH	2	*1.9*	10	*0.7*	12	*0.8*

Table 6A (item 5) shows six types of combinations of primary and secondary level facilities. The most frequent combination for CS HHs was PMP and GH with 6.7% doing so. Use of other combinations was negligible. **Hardly any of the SPs in CS HHs had visited the District Tuberculosis Centre (DTC), even on referral from the primary level** (not shown in the Table).

3.7.2 ***Popularity of different types of Health facilities among Rural SPs:*** The lowest part of Table 6A shows that **the facility which was used most (either alone or in combination with others) was PMP (92.2%),** the proportion for CS HHs and non – CS HHs being 91.4% and 92.3% respectively. Next came GH (5.0%), PHC (a negligible 2.3%) and NGH (an even more negligible 0.8%). **The most popular facility among both types of HHs was PMP (with more than 90% using it). PHC was used by less than 3% only.** Though hospitals were not used so often, CS HHs used this facility comparatively more than non-CS HHs. The relevant figures were 8.6% and 4.8% for GH and 1.9% and 0.7% for NGH.

3.7.3 ***Action taken by Urban SPs : By type of Sick HHs :*** Table 7A shows the action taking pattern in urban areas. Information was available for all but one CS HHs and all non-CS HHs. While 2.0% did not take any action, 2.7% did not consult any health facility. **The remaining 95.3% (88.9% for CS HHs and 96.0% for non-CS HHs) visited some health facility, some of them using multiple facilities**. Percentage not taking action was higher among CS HHs (6.8%) compared to non-CS HHs (1.5%). **Those contacting only primary level facilities formed 70.1% which was less than 90.5% in rural areas** (Table 6A). This proportion was less among CS HHs (46.2%) compared to non-CS HHs (72.1%). **Those using secondary facilities alone was higher in urban areas (17.4%) compared to 2.9% in rural areas (Table 6). Those using both primary and secondary levels was much higher among CS HHs** (27.4%) compared to non-CS HHs (6.3%) which was quite similar to that

Table 7A

Action taken by HHs when someone was sick during the last six months in urban Raichur by type of HH

Health facility contacted	Sick HHs					
	CS		Non – CS		Total	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. **No action**	8	6.8	22	1.5	30	2.0
2. **Action without medical consultation**	5	4.3	36	2.5	41	2.7
3. **Primary level**						
a) PMP	53	45.3	1,012	71.3	1,065	69.3
b) PHC	0	0.0	12	0.8	12	0.8
c) PMP & PHC	1	0.9	0	0.0	1	0.1
h) Others	0	0.0	0	0.0	0	0.0
i) PMP & Others	0	0.0	0	0.0	0	0.0
Sub – total	**54**	**46.2**	**1,024**	**72.1**	**1,078**	**70.1**
4. **Secondary level**						
a) GH	13	11.1	232	16.3	245	15.9
b) NGH	3	2.6	14	1.0	17	1.1
c) GH & NGH	1	0.9	3	0.2	4	0.3
d) NGH & Santorium	1	0.9	0	0.0	1	0.1
Sub – total	**18**	**15.4**	**249**	**17.5**	**267**	**17.4**
5. **Primary & Secondary level**						
a) PMP & GH	17	14.5	72	5.1	89	5.8
b) PMP& NGH	7	6.0	11	0.8	18	1.2
c) PMP & sanatorium	4	3.4	0	0.0	4	0.3
d) PMP & 2 other facilities	4	3.4	5	0.4	9	0.6
e) PHC & GH	0	0.0	0	0.0	0	0.0
j) PHC & NGH	0	0.0	0	0.0	0	0.0
k) Others & GH	0	0.0	1	0.1	1	0.1
Sub – total	**32**	**27.4**	**89**	**6.3**	**121**	**7.9**
6. **Other combinations (mostly 3 or more facilities)**	0	0.0	0	0.0	0	0.0
7. Not stated	1	0.8	0	0.0	1	0.1
Total	**118**		**1,420**		**1,538**	
Total contribution (alone or in combination) by						
a) PMP	86	73.5	1,100	77.5	1,186	77.2
b) PHC	1	0.9	12	8.5	13	0.8
c) GH	31	26.5	308	21.7	335	21.8
d) NGH	12	10.3	28	2.0	40	2.6

in rural areas with percentages of 11.4% and 2.4% respectively. The most common combination in urban areas was PMP and GH (5.8%) followed by PMP and NGH (1.2%), both quite small. The use of these two combinations was higher among CS HHs compared to non-CS sick HHs. The relevant figures for the first combination were 14.5% and 5.1% respectively and those for the second combination were 6.0% and 0.8%. Only 0.3% had used the combination of PMP with sanatorium/DTC.

3.7.4 ***Popularity of different types of Health facilities among Urban SPs:*** The lower part of Table 7A shows that the **facility which was used most (either alone or in combination with others) was PMP (77.2%),** the proportion for CS HHs and non-CS sick HHs being 73.5% and 77.5% respectively. Next came government hospital (21.8%) followed by non-government hospital (2.6%). Government hospital was preferred by both types of HHs to non-government hospital. The relevant figures for CS HHs were 26.5% and 10.3% and for non-CS HHs 21.7% and 2.0%, the latter type of HH making less use of either type of hospital.

3.7.5 Action taken by Rural CO and OS : Action taken by persons suffering from cough and other symptoms in rural areas is shown in Table 8A. . The relevant information was available from all HHs except one with SP suffering from symptoms other than cough. The most striking findings from Table 8A are that (a) **percentage of rural SPs contacting PHC was negligible (total contribution being 1.8% only)** and (b) **persons with cough for more than three weeks behaved differently from those with cough of less than or equal to three weeks and with other symptoms.** About 90% of the last two groups contacted primary level facilities alone, almost all of them visiting PMP. Visiting both primary and secondary level facilities was negligible. In contrast, 79.1% of those with cough of three weeks or more contacted primary level alone and 9.6% visited various combinations of primary and secondary level facilities, depicting hectic efforts by one-tenth of these SPs by visiting multiple centres to get relief of

Table 8A

Action taken by persons suffering from cough and other symptoms during the last six months in rural Raichur

Health facility contacted	Sick HHs					
	Cough ≤ 3 weeks		Cough > 3 weeks		Other Sysmptoms	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. **No action**	13	*3.2*	9	*7.8*	34	*1.8*
2. **Action without medical consultation**	15	*3.6*	1	*0.9*	47	*2.5*
3. **Primary level**						
a) PMP	358	*87.1*	86	*74.8*	1,668	*89.0*
b) PHC	8	*1.9*	0	*0.0*	32	*1.7*
c) PMP & PHC	0	*0.0*	3	*2.6*	2	*0.1*
l) Others	0	*0.0*	2	*1.7*	5	*0.3*
m) PMP & Others	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**366**	***89.1***	**91**	***79.1***	**1,707**	***91.1***
4. **Secondary level**						
a) GH	14	*3.4*	2	*1.7*	69	*3.7*
b) NGH	1	*0.2*	0	*0.0*	10	*0.5*
c) GH & NGH	0	*0.0*	1	*0.9*	0	*0.0*
d) NGH & Santorium	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**15**	***3.6***	**3**	***2.6***	**79**	***4.2***
5. **Primary & Secondary level**						
a) PMP & GH	2	*0.5*	6	*5.2*	4	*0.2*
b) PMP& NGH	0	*0.0*	2	*1.7*	2	*0.1*
c) PMP & sanatorium	0	*0.0*	2	*1.7*	0	*0.0*
d) PMP & 2 other facilities	0	*0.0*	1	*0.9*	0	*0.0*
e) PHC & GH	0	*0.0*	0	*0.0*	0	*0.0*
n) PHC & NGH	0	*0.0*	0	*0.0*	0	*0.0*
o) Others & GH	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**2**	***0.5***	**11**	***9.6***	**6**	***0.3***
6. **Other combinations (mostly 3 or more facilities)**	0	*0.0*	0	*0.0*	0	*0.0*
7. Not stated	0	*0.0*	0	*0.0*	1	*0.1*
Total	**411**		**115**		**1,874**	
Total contribution (alone or in combination) by						
a) PMP	360	*87.6*	100	*87.0*	1,676	*89.4*
b) PHC	8	*1.9*	3	*2.6*	34	*1.8*
c) GH	16	*3.9*	9	*7.8*	73	*3.9*
d) NGH	1	*0.2*	3	*2.6*	12	*0.6*

their suffering. **Surprisingly, only two out of 115 persons with cough for more than three weeks (1.7%) visited DTC or sanatorium.**

3.7.6 ***Popularity of different types of Health facilities among CO and OS:*** **The total contribution of PMP (alone or in combination with others) was 87.0% for those with cough for more than three weeks** and did not differ from that for the other two groups. **The total contribution of PHC was only 2.6% for those with cough for more than three weeks**, 1.8% for those with other symptoms and 1.9% for those with cough for less than or equal to three weeks. The contribution by hospital (government or non-government) was better particularly among those with cough for more than three weeks (10.4%) compared to 4.5% and 4.1% among the other two groups.

3.7.7 ***Action taken by Urban CO and OS :*** Table 9A shows that the situation was similar in urban areas also. The main difference was a reduction in those contacting primary level facilities and a consequent substantial increase in those contacting secondary level facilities directly. Primary level contacts were almost entirely confined to PMP, PHC being a rural set up. Reduction in use of primary level was much more among those with cough for more than three weeks with only 49.2% doing so. Those using secondary level was 15.9% and both levels 22.0%. The last proportion was only 0.6% and 1.3% for the other two groups of SPs. Direct use of secondary level was highest among SPs with other symptoms (22.9%) and least among SPs with cough for less than or equal to three weeks (13.1%). **Even in urban areas with a DTC close at hand and easy transport facilities, its contribution was negligible.** The contribution of the sanatorium (which was also similarly located) was comparatively more but still negligible. Only five SPs with cough for more than three weeks (3.8%) visited DTC/Sanatorium.

Table 9A

Action taken by persons suffering from cough and other symptoms during last six months in urban Raichur

Health facility contacted	Sick HHs					
	Cough ≤ 3 weeks		Cough > 3 weeks		Other Sysmptoms	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. **No action**	14	3.7	16	12.1	41	2.4
2. **Action without medical consultation**	22	5.8	1	0.8	49	2.9
3. **Primary level**						
a) PMP	288	75.6	64	48.5	1,197	70.2
b) PHC	2	0.5	0	0.0	15	0.9
c) PMP & PHC	0	0.0	1	0.8	0	0.0
p) Others	0	0.0	0	0.0	2	0.1
q) PMP & Others	0	0.0	0	0.0	0	0.0
Sub – total	**290**	**76.1**	**65**	**49.2**	**1,214**	**71.2**
4. **Secondary level**						
a) GH	46	12.1	15	11.4	361	21.2
b) NGH	4	1.0	4	3.0	28	1.6
c) GH & NGH	0	0.0	1	0.8	2	0.1
d) NGH & Santorium	0	0.0	1	0.8	0	0.0
Sub – total	**50**	**13.1**	**21**	**15.9**	**391**	**22.9**
5. **Primary & Secondary level**						
a) PMP & GH	5	1.3	17	12.9	8	0.5
b) PMP& NGH	0	0.0	4	3.0	1	0.1
c) PMP & sanatorium	0	0.0	5	3.8	0	0.0
d) PMP & 2 other facilities	0	0.0	3	2.3	0	0.0
e) PHC & GH	0	0	0	0.0	1	0.1
r) PHC & NGH	0	0.0	0	0.0	0	0
s) Others & GH	0	0.0	0	0.0	0	0
Sub – total	**5**	**1.3**	**29**	**22.0**	**10**	**0.6**
6. **Other combinations (mostly 3 or more facilities)**	0	0.0	0	0.0	0	0.0
7. Not stated	1	0.3	1	0.8	0	0.0
Total	**382**		**133**		**1,705**	
Total contribution (alone or in combination) by						
a) PMP	293	76.9	94	71.2	1,206	70.7
b) PHC	2	0.5	1	0.8	16	0.9
c) GH	51	13.4	33	25.0	372	21.8
d) NGH	4	1.0	10	7.6	31	1.8

3.7.8 ***Action taken by Main Groups of Symptoms:*** Comparison of the action taking pattern among the five main groups of symptoms in rural areas showed that **the vast majority of all the five groups contacted primary health facilities**, the percentages varying from 82.1% to 93.2%. The contacts were almost exclusively to PMP (varying from 79.7% to 91.2%). The percentage contacting secondary level facilities varied from 3.5 to 8.0. The situation was similar in the urban areas. **The most striking difference between rural and urban areas was the higher direct use of secondary level facilities and less use of primary level facilities irrespective of the type of symptoms**. Proportion of urban SPs using primary level facilities varied from 53.2% to 78.3% and those directly using secondary level facilities varied from 17.5% to 40.0%. Where secondary level facilities are available, as in urban areas, sizeable proportions of sick persons contact these facilities directly.

3.7.9 ***Action taken by CO and OS*** : One striking finding from Tables 8A and 9A is that **the proportion making direct use of secondary level was about 3.6 times higher for SPs with cough for three weeks or less and about six times higher for the other two groups of SPs in urban areas compared to rural areas.** It is significant that use of both primary or secondary level facilities was higher in urban areas (2.3 times higher) only among persons suffering from cough for more than three weeks. This proportion was negligible among the other two groups in rural and urban areas. It is also significant that among those with cough for more than three weeks about 80% (rural) and 50% (urban) had made use of primary level facilities only.

3.7.10 ***Action taken by Rural SPs for different durations of sickness***: The different types of action taken by persons with different durations of sickness is shown in Table 10A for rural areas. It may be pointed out that the information collected gives only the approximate interval between onset of symptoms and taking of action and the findings from this Table

should only be considered to give some broad indications and possible hypotheses for planning further studies. **Action at primary level was taken by 92.4% with duration of 0-7 days, 91.8% with duration of 8-28 days and 82.0% with duration of 29 days or more (29+) showing a steady decline in use of primary level facilities with time**. Percentage visiting PHC was negligible for all durations. It is significant that **even after 29 days, more than 80% had contacted or continued to contact primary level facilities** (mostly PMP). Those directly contacting secondary facilities increased from 3.2% for 0-7 days to 4.3% for 8-28 days and to 6.4% for 29+ days. The same trend was shown for those contacting both primary and secondary level facilities eventhough the respective percentage of 0.1, 0.7 and 2.9 were all negligible. It is signficant that, **for each duration, the direct use of secondary level was much more than its use after visiting primary level facilities**. Among those with duration less than eight days, visits to PMP (either alone or in combination with others) were most frequent (90.5%) followed by government hospital (2.9%) and non-government hospital (0.5%), each of them alone or in combination with others. For the long duration of 29+ days, the pattern was the same but with less frequent visits to PMP and more to hospital. The relevant figures were : 83.5% to PMP, 7.0% to Government Hospital and 1.9% to Non-Government hospital, each of them either alone or in combination with others. Contribution by PHC was as low as 1.7% to 2.2%. Another significant observation is that the percentage not taking action was higher for duration of 29+ days (6.0%) compared to the other two durations (1.4% each).

3.7.11 ***Duration for different actions by Rural SPs***: The second set of percentages given in Table 10A shows some interesting possibilities or hypotheses for further investigation. **Among those who did not take any action, 37.5% had their symptoms for less than eight days only** and could have taken action later on with increase in duration of symptoms. But, it is significant that **as large a proportion as 51.8% had symptoms**

Table 10A

Action taken according to duration of sickness in rural Raichur

Health facility contacted	Duration of sickness in days								
	<8			8 – 28			29+		
	No.	% (1)	% (2)	No.	% (1)	% (2)	No.	% (1)	% (2)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. No action	21	*1.4*	37.5	6	*1.4*	10.7	29	*6.0*	51.8
2. Action without medical consultation	43	*2.9*	68.3	7	*1.7*	11.1	13	*2.7*	20.6
3. Primary level									
a) PMP	1,354	*90.3*	64.1	370	*88.9*	17.5	388	*80.2*	18.4
b) PHC	27	*1.8*	67.5	7	*1.7*	17.5	6	*1.2*	15.0
c) PMP & PHC	1	*0.2*		2	*0.5*		2	*0.4*	
d) Others	3	*0.2*		3	*0.7*		1	*0.2*	
e) PMP & Others	0	*0.0*		0	*0.0*		0	*0.0*	
Sub – total	**1,385**	***92.4***	**64.0**	**382**	***91.8***	**17.7**	**397**	***82.0***	**18.3**
4. Secondary level									
a) GH	42	*2.8*	49.4	18	*4.3*	21.2	25	*5.2*	29.4
b) NGH	6	*0.4*		0	*0.0*		5	*1.0*	
c) GH & NGH	0	*0.0*		0	*0.0*		1	*0.2*	
d) NGH & Sanatorium	0	*0.0*		0	*0.0*		0	*0.0*	
Sub - total	**48**	***3.2***	**49.5**	**18**	***4.3***	**18.6**	**31**	***6.4***	**32.0**
5. Primary and Secondary level									
a) PMP & GH	1	*0.1*		3	*0.7*		8	*1.7*	
b) PMP & NGH	1	*0.1*		0	*0.0*		3	*0.6*	
c) PMP & sanatorium	0	*0.0*		0	*0.0*		2	*0.4*	
d) PMP & 2 other facilities	0	*0.0*		0	*0.0*		1	*0.2*	
e) PHC & GH	0	*0.0*		0	*0.0*		0	*0.0*	
f) PHC & NGH	0	*0.0*		0	*0.0*		0	*0.0*	
g) Others & GH	0	*0.0*		0	*0.0*		0	*0.0*	
Sub - total	**2**	***0.1***		**3**	***0.7***		**14**	***2.9***	
6. Other combinations (mostly 3 or more facilities)	0	*0.0*		0	*0.0*		0	*0.0*	
7. Not stated	1	*0.1*		0	*0.0*		0	*0.0*	
Total	**1,500**		**62.5**	**416**		**17.3**	**484**		**20.2**
Total contribution (alone or in combination) by									
a) PMP	1,357	*90.5*	63.5	375	*90.1*	17.6	404	*83.5*	18.9
b) PHC	28	*1.9*	62.2	9	*2.2*	20.0	8	*1.7*	17.8
c) GH	43	*2.9*	43.9	21	*5.0*	21.4	34	*7.0*	34.7
d) NGH	7	*0.5*		0	*0.0*		9	*1.9*	

Note : 1. % (1) shows the percentage taking each type of action within each duration (vertical percentages)

for a long time (29+ days, most of which was 90+ days) showing that for some reason they had either continued to postpone action or decided against it. Those with duration of 8-28 days formed only 10.7% of the SPs who did not take any action and formed a trough between the two peaks. Among those who took action without consulting any health facility, 68.3% had the symptoms for less than eight days only and might have consulted a health facility later on if their symptoms did not subside. But, 20.6% had symptoms for a long time (29+ days) and yet probably continued to take the same type fo action without medical consultation or left that also. Again those with duration of 8-28 days formed a trough between the two peaks with a proportion of 11.1%. The pattern was similar among those who had consulted GH only with those consulting early (less than eight days) and very late (29+ days) together constituting 78.8% of those SPs. The trough for duration of 8-28 days had only 21.2% of these SPs. The second peak, which could include delayed action and repeated action by visiting the same facility, was not so prominent for GH (29.4%). There was no second peak for those who consulted PMP only, who formed 88% of all SPs. The three groups of SPs (viz., those who took no action, or action without medical consultation or consulted only GH) which showed a similar pattern with two peaks and a trough in between, together formed only 8.5% of the total SPs (7.1% among those with duration of less than eight days and 13.8% among those with duration of 29+ days. Thus, SPs in the above mentioned three groups fall into three types, one taking early action (52.0%) another taking very late action (32.8%) and the third in between (15.2%).

3.7.12 ***Duration for Multiple actions by Rural SPs***: Those taking dual or multiple actions covering both primary and secondary level health facilities, formed only a negligible proportion of all SPs (0.8%). Since SPs consulting secondary level formed only 4.0% of total SPs, action was almost entirely restricted to primary level facilities, overwhelmingly by PMP.

3.7.13 ***Action taken by Urban SPs for different durations of sickness***: The patterns were generally similar in urban areas but with some exceptions (Table 11A). So also some interesting possibilities or hypotheses for further investigation shown by the second set of percentages in Table 11A. **With increase in duration of symptoms, the use of primary level facility steadily declined and that of secondary level facilities increased,** this being mainly due to the higher direct use of secondary level facilities and not that of facilities at both levels, for each duration of symptoms. The relevant figures for the decreasing use of the primary level were : 76.1% for duration less than eight days, 65.5% for 8-28 days and 60.6% for 29+ days in urban areas compared to 92.4%, 91.8% and 82.0% respectively in rural areas (Table 10A). The relevant figures for increased use of secondary level facilities were : 18.0% for duration less than eight days, 25.1% for 8-28 days and 25.0% for 29+ days in urban areas compared to 3.2%, 4.3% and 6.4% respectively in rural areas (Table 10A). While the percentage of those who took no action out of SPs with different durations showed an increasing trend (from 1.7% to 4.8% and to 5.8%) that for action without medical consultation showed a decreasing trend (from 3.8% to 3.6% and to 1.6%). The total contribution by PMP, (either alone or in combination with others) did not show the same trend as in rural areas. But, total contribution by GH showed an increasing trend with increase in duration (from 17.5% to 24.3% and to 25.8%).

3.8. Action taken by the Sick (CS HHs)

3.8.1 ***Additional Data on Action taken by SPs in CS HHs***: Only very little information on the health facilities contacted has been collected from all sick HHs because of limitations in time. In order to get more detailed picture, some additional questions were asked from CS HHs about the health facilities contacted when someone was sick (not only CS) during the last six months. These details are discussed in the next few paragraphs.

Table 11A

Action taken according to duration of sickness in urban Raichur

Health facility contacted	Duration of sickness in days								
	<8			8 – 28			29+		
	No.	% (1)	% (2)	No.	% (1)	% (2)	No.	% (1)	% (2)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. No action	23	*1.7*	32.4	19	*4.9*	26.8	29	*5.8*	50.0
2. Action without medical consultation	50	*3.8*	69.4	14	*3.6*	19.4	8	*1.6*	11.1
3. Primary level									
a) PMP	992	*74.8*	64.0	255	*65.2*	16.5	302	*60.4*	19.5
b) PHC	16	*1.2*		1	*0.3*		0	*0.0*	
c) PMP & PHC	0	*0.0*		0	*0.0*		1	*0.2*	
d) Others	2	*0.2*		0	*0.0*		0	*0.0*	
e) PMP & others	0	*0.0*		0	*0.0*		0	*0.0*	
Sub – total	**1,010**	***76.1***	**64.4**	**256**	**65.5**	**16.3**	**303**	***60.6***	**19.3**
4. Secondary level									
a) GH	227	*17.1*	53.8	91	*23.3*	21.6	104	*20.8*	24 6
b) NGH	12	*0.9*	33.3	7	*1.8*	19.4	17	*3.4*	47.2
c) GH & NGH	0	*0.0*		0	*0.0*		3	*0.6*	
d) NGH & Sanatorium	0	*0.0*		0	*0.0*		1	*0.2*	
Sub - total	239	*18.0*	51.7	98	*25.1*	21.2	125	*25.0*	27.1
5. Primary and Secondary level									
a) PMP & GH	4	*0.3*		4	*1.0*		22	*4.4*	
b) PMP & NGH	0	*0.0*		0	*0.0*		5	*1.0*	
c) PMP & sanatorium	0	*0.0*		0	*0.0*		5	*1.0*	
d) PMP & 2 other facilities	0	*0.0*		0	*0.0*		3	*0.6*	
e) PHC & GH	1	*0.1*		0	*0.0*		0	*0.0*	
f) PHC & NGH	0	*0.0*		0	*0.0*		0	*0.0*	
g) Others & GH	0	*0.0*		0	*0.0*		0	*0.0*	
Sub - total	5	*0.4*	11.4	4	*1.0*	9.1	35	*7.0*	79.5
6. Other combinations (mostly 3 or more facilities)	0	*0.0*		0	*0.0*		0	*0.0*	
7. Not stated	0	*0.0*		0	*0.0*		2	*0.4*	
Total	**1,327**		**59.8**	**391**		**17.6**	**502**		**22.6**
Total contribution (alone or in combination) by									
a) PMP	996	*75.1*	62.5	259	*66.2*	16.3	338	*67.6*	21.2
b) PHC	17	*1.3*		1	*0.3*		1	*0.2*	
c) GH	232	*17.5*	50.9	95	*24.3*	20.8	129	*25.8*	28.3
d) NGH	12	*0.9*	26.7	7	*1.8*	15.6	26	*5.2*	57.8

Note : For explanation of % (1) and % (2) see footnotes under table 10A.

3.8.2 ***Particulars of PMP*** : **In the CS HHs, 66.7% in rural areas and 52.1% in urban areas had contacted a PMP when someone had any symptoms**. Questions regarding whether the PMP was a registered practitioner, the basis of registration and the system of medicine actually practised could not generally be answered by the respondents. About one-fifth (19.1%) of the rural and 43.3% of urban CS HHs answered that the PMP contacted was a practitioner registered on the basis of his educational qualification and was practicing allopathy. Two (3.3%) of urban CS HHs stated that they had contacted PMP of ayurveda, one stating that PMP was registered on the basis of educational qualification. The remaining 80.9% of rural and 53.3% of urban CS HHs did not know any of these details.

3.8.3 ***Distance travelled for contacting PMP*** : Out of the rural CS HHs consulting PMP, 47.1% travelled less than one km followed by 37.1% travelling 1-5 km, 5.7% travelling 6-10 km and 10% travelling more than 10 km. Among urban CS HHs 41.0% travelled less than one km and 55.7% travelled 1-5 km showing the easy approach to PMP for HHs in urban areas. Only 3.3% of urban CS HHs travelled more than 5 km compared to 15.8% of rural CS HHs. **The average distance travelled to contact PMP was 4.1 km in rural areas compared to 3.2 km in urban areas**. This question was answered by 100% of the respondents in both rural and urban areas.

3.8.4 ***Reason for not contacting PMP:*** In rural areas, 8.6% did not contact PMP because they had contacted a health institution (HI) – 2.9% because it was nearby and 5.7% because of good treatment there. The vast majority (91.5%) did not take any action, 8.6% because they did not have money and 82.9% for other reasons. In the urban areas, the no action group was smaller and formed 63.1% of those who did not consult a PMP. Consulting a HI was the reason given by 29.7% - 20.4% because it was nearby, 5.6% because of good treatment at the HI and 3.7% because of

other reasons. While 7.4% of urban CS HHs had taken action without medical consultation (3.7% each resorting to home remedies and self-medication by buying medicines), no rural CS HH had done so. The non-response rate was nil for rural CS HHs and quite low (3.6%) for urban CS HHs.

3.8.5 ***Contacts with PMP and HI*** : When asked whether they had contacted a health institution (HI) when someone was sick during the last six months, only 12.4% of the CS HHs in rural areas said they had – 8.6% visiting PMP also. The corresponding figures for urban areas were 27.4% and 13.7% respectively. Percentage of CS HHs contacting both PMP and HI was somewhat less in rural areas (8.6%) compared to urban areas (13.7%). Those contacting only HI was as low as 3.8% in rural areas compared to 13.7% in urban areas. The non-response rate was nil for rural CS HHs and (0.8%) for urban CS HHs.

3.8.6 ***Preference among HIs*** : Among the HIs contacted by the rural sample, GH came first (38.5%) followed by NGH (23.1%) and DTC/sanatorium and government dispensaries (15.4% each). PHC was contacted by 7.7% only. In urban areas, 56.3% contacted GH, 25.0% NGH and 6.3% DTC/ sanatorium.

3.8.7 ***Facilities in HI*** : Asked about the facilities available in the HI contacted, 76.9% said it was good, 13.2% not so good and 15.4% not at all good, in rural areas. A larger percentage (87.5%) stated that it was good, in urban areas. Yet, HIs were very much less popular than PMPs (refer para 3.8.5). The non-response rate for this question was nil in both rural and urban areas.

3.8.8 ***Distance travelled for contacting HIs*** : In rural areas, 23.1% travelled 1-5 km and 6-10 km to reach the nearest HI, followed by 15.4% each travelling less than one km, 41-70 km and 71 km or more. In urban areas,

75.0% travelled 1-5 km followed by 12.5% travelling less than one km and 6.3% each travelling 41-70 km and 71 km or more. The proportion of CS HHs who travelled less than 6 km to reach the HI was much less in rural areas (38.5%) compared to urban areas (87.5%) and showed that urban HHs have more easy access to HIs. Further, a larger proportion travelled long distances of 41 km or more from rural areas (30.8%) compared to urban areas (12.6%). Consequently, **the average distance travelled from rural areas (24.8 km) was about 2.4 times of that from urban areas** (10.4 km). Non - response rate for this question was nil for both rural and urban areas.

3.8.9 ***Nearest HI contacted*** : The majority (61.5% rural and 93.8% urban) stated that the nearest HI contacted dispensed medicines only partly, the latter being much larger than the former. In rural areas, 61.5% travelled by bus, 15.4% walked to the HI and 7.7% each travelled by unscheduled transport, own vehicle and free lift on two wheeler. The proportion who walked to the HI was much higher in urban areas (65.6%). While 31.3% went by bus, 3.1% travelled by lorry or van (unscheduled transport).

3.8.10 ***Other HIs contacted*** : Information was collected for all HIs contacted by the CS HHs when someone was sick during the last six months so that a comparison could be made between the nearest, second nearest and farthest. But no CS HH in rural areas and only one CS HH in urban areas had contacted atleast one more HI.

3.8.11 ***Satisfaction with Services*** : Satisfaction with the services provided by the HI contacted was the same among rural CS HHs (50.0%) and urban CS HHs (48.1%). The reason for not being satisfied was "treatment not good" for 100% of those not satisfied in rural areas and for 92.3% in urban areas. The non-response rate was nil for most of these questions and negligible for the others, in both rural and urban areas, except for reasons for dissatisfaction for which the non-response rate was 7.7% for rural and 15.6% for urban CS HHs

3.9 Prevalence of Chest Symptomatics

3.9.1 ***Prevalence in sample villages and wards*** : Prevalence rate for CS in the sample villages of Maski PHC, which had one big village with population of 4,043 and four villages with small populations ranging from 150 to 358, varied from 0.7% to 2.1% with an overall rate of 1.3%. The highest prevalence of 1.3% was found in the biggest of these villages with a population of 4,043. The two sample villages of Anegundi PHC were big villages with population of 2,949 and 2,065 and had prevalence rate of 0.7% and 0.9%, with an overall rate of 0.8% which was about 60% of that in Maski PHC. The five sample wards of Raichur town had prevalence rate varying from 0.6% to 1.5% with an overall rate of 0.8%. The prevalence rate in Gangawati town was 1.5%, (almost double of that for Raichur town), with variation from 0.8% to 2.3% among the five sample wards.

3.9.2 ***Response to Questions*** : Out of the total CS, 15.1% in rural areas and 13.3% in urban areas could not be interviewed. (No proxy interviews were allowed for CS). Detailed information has been collected for the remaining 90 (84.9%) rural CS and 104 (86.7%) urban CS. However, there was some non-response for each question because a few CS did not state specific answer for it. This was either nill or negligible.

3.9.3 ***Age-sex Prevalence rates*** : In all, 226 chest symptomatics (CS) were identified – 166 in rural areas and 120 in urban areas. Of these, females formed 37.6% (40.6% in rural areas and 35.0% in urban areas), the pattern being exactly the opposite of that in Mysore District (34.3% rural and 40.7% urban). The prevalence rate per 1,000 population for CS in different age-sex groups in rural and urban areas is shown in Table 12A. **The prevalence rate steadily increased with age among males and females in rural and urban areas**, the increase being much faster among males. The only exceptions were a slight drop in rate for urban females of age 35-44 and 65+ and urban males of age 65+ compared to the

Table 12A

Prevalence rate (PR) per 1000 for CS in age – sex and rural / urban groups (Raichur District)

Area	Sex	Age group						
		15 – 24	25 – 34	35 – 44	45 – 54	55 – 64	65+	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Rural	F: No.	2	3	2	15	10	11	43
	PR (‰)	*2.2*	*3.7*	*3.7*	*37.0*	*38.2*	*48.2*	*8.5*
	M: No.	3	5	6	15	18	16	63
	PR(‰)	*3.1*	*6.6*	*10.1*	*36.0*	*70.3*	*98.8*	*12.6*
	T: No.	5	8	8	30	28	27	106
	PR(‰)	*2.7*	*5.1*	*7.1*	*36.5*	*54.1*	*69.2*	*10.5*
Urban	F: No.	2	7	4	14	11	4	42
	PR (‰)	*2.0*	*8.5*	*6.4*	*42.3*	*44.2*	*24.1*	*8.3*
	M: No.	6	9	18	12	19	14	78
	PR(‰)	*6.9*	*11.8*	*28.0*	*28.8*	*91.8*	*87.5*	*15.1*
	T: No.	8	16	22	26	30	18	120
	PR(‰)	*4.3*	*10.1*	*17.4*	*34.8*	*65.8*	*55.2*	*11.7*
Rural + Urban (Weighted rates)	*F: PR (‰)*	*2.1*	*5.1*	*4.5*	*38.6*	*40.0*	*41.0*	*8.4*
	M:PR(‰)	*4.2*	*8.2*	*15.5*	*33.8*	*76.8*	*95.4*	*13.4*
	T:PR(‰)	*3.2*	*6.6*	*10.2*	*36.0*	*57.6*	*65.0*	*10.9*

F - Females M - Males T - Total (both sexes)

preceeding age group. The overall prevalence rate was lower among females (8.4) compared to males (13.4). The prevalence rate for females was about two-thirds of the male prevalence rate in rural areas and about 55% of that in urban areas. This lower prevalence was observed for all age groups except 45-54 in rural and urban areas. Similarly, the overall prevalence rate was lower in rural areas compared to urban areas for all age groups except 45-54, and 65+, the overall rates being 10.5 (rural) and 11.7 (urban).

3.9.4 ***Prevalence rate by type of family, religion and caste, education status and occupation :*** Table 13A shows the prevalence rates in different population groups. **Joint families had the highest prevalence rate and extended families the least, in both rural and urban areas**. Families with 1-3 members had the highest prevalence rate in rural areas followed by those with 7-9 members, 4-6 members and 10 or more members. The last group with least prevalence rate is likely to include most of the extended families. In urban areas also prevalence rate was lowest in families of size 10 or more. **Prevalence rate decreased steadily with increase in family size in urban areas**. This seems to be the pattern in rural areas also except for the higher rate in families with 7-9 members. In rural areas, prevalence rate, was highest among SC/ST (15.1) followed by BCs (9.9) and Muslims (8.5). Muslims had the highest rate in urban areas (16.0) followed by SC/ST (12.1) and BCs (11.0). **Other Hindus had the lowest rate in both areas. Surprisingly, prevalence rate increased with increase in the level of education, in both rural and urban areas**. Prevalence rate among illiterates was much less than that for the other two education groups in both areas, being about 40% of that for below SSc and about 30% of that for SSc+. **In rural and urban areas, unemployed persons had the highest prevalence rates and students had no CS among them**. Among the larger occupation groups (with more than 500 persons in the study sample) in rural areas, the highest prevalence rate was observed for those engaged in agriculture

Table 13A

Prevalence rate (PR) per 1000 for CS in some other population groups (Mysore District)

Population group	Rural			Urban			Ovrall PR (weighted)
	Population	CS		Population	CS		
		No.	‰		No.	‰	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. **Type of family**							
Nuclear	4,372	31	*7.1*	4,956	54	*10.9*	8.2
Joint	4,289	67	*15.6*	3,605	62	*17.2*	16.1
Extended	1,397	8	*5.7*	1,704	4	*2.3*	4.7
2. **Family size**							
1 – 3	708	15	*21.2*	780	11	*14.1*	19.1
4 – 6	4,142	38	*9.2*	4,741	66	*13.9*	10.6
7 – 9	3,114	35	*11.2*	3,002	31	*10.3*	10.9
10 +	2,094	18	*8.6*	1,742	12	*6.9*	8.1
3. **Religion & caste**							
SC/ST	3,171	48	*15.1*	4,223	51	*12.1*	14.2
BCs	2,929	29	*9.9*	2,549	28	*11.0*	10.2
Other Hindus	2,295	15	*6.5*	1,380	9	*6.5*	6.5
Muslims	1,653	14	*8.5*	2,006	32	*16.0*	10.8
4. **Education level**							
Illiterate	4,064	27	*6.6*	4,102	30	*7.3*	6.8
Below SSC	2,956	46	*15.6*	3,206	60	*18.7*	16.5
SSC +	1,300	33	*25.4*	1,242	30	*24.2*	25.0
5. **Occupation**							
Unemployed	433	31	*71.6*	399	24	*60.2*	68.2
Students (age 15+)	2,006	0	*0.0*	2,015	0	*0.0*	0.0
Housewives	1,904	19	*10.0*	1,956	26	*13.3*	11.0
Employed in :							
a. Agriculture in allied work	1,913	36	*18.8*	687	12	*17.5*	18.4
b. Business & allied HH industry	581	6	*10.3*	725	20	*27.6*	15.5
c. Skilled labour	370	8	*21.6*	856	15	*17.5*	20.4
d. Unskilled labour	445	4	*9.0*	971	20	*20.6*	12.5

NC – Not calculated because of small population (less than 500)

Note – In cols (2) and (5) population of all ages have been used except for population group (Occupation)

and allied work (18.8) followed by business and allied HH industry (10.3) and housewives (10.0). Among the larger urban occupation groups, the highest prevalence rate was for business and allied HH industry (27.6) followed by those engaged in unskilled labour (20.6), agriculture and allied work and skilled labour (17.5 each) and housewives (13.3). Among those engaged in business and allied HH industry in urban areas (27.6), the rate was nearly three times higher compared to that in rural areas (10.3). Prevalence rate among unskilled labour in urban areas (20.6) was more than double of that in rural areas (9.0).

3.9.5 ***Age – Sex distribution of CS*** : The age-sex distribution of CS is shown in Table 14A. The proportion of CS in the first three age groups was less in rural areas as compared to urban areas and in the last three age groups higher. Thus, the proportion of CS of age 45 or more was higher in rural areas (80.2%) compared to urban areas (61.7%). The percentage contributions by different age groups shown in Table 14A indicate two peaks for urban CS. For females, the peaks were at age groups 25-34 and 45-54 and for males at age groups 35-44 and 55-64. While the distribution for rural females was fluctuating (may be showing three peaks), that for rural males had a single peak at age group 55-64. Average age of the CS was 52.4 (rural) and 47.7 (urban).

3.10 Symptoms during the reference period

3.10.1 ***Frequency of additional symptoms*** : A study of the symptoms present during the reference period of the study showed that **12.2% only of rural CS and 15.4% of urban CS had no symptom other than cough**. At the other extreme, those who had fever, chest pain, loss of weight and night sweat in addition to productive cough formed 3.3% in rural areas and 12.5% in urban areas. The most common second symptom was chest pain - 57.8% (rural) and 60.6% (urban). Next came fever with 36.0% of rural and 50.6% of urban CS having this additional symptom. Only 13.0% in rural areas and 20.0% in urban areas had haemoptysis. Those having

Table 14A

Percentage distribution of chest symptomatics males / females in rural and urban areas (Raichur district)

Area	Age group	Females		Males		Both sexes	
		No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rural	15 – 24	2	*4.7*	3	*4.8*	5	*4.7*
	25 – 34	3	*7.0*	5	*7.9*	8	*7.5*
	35 – 44	2	*4.7*	6	*9.5*	8	*7.5*
	45 – 54	15	*34.9*	15	*23.8*	30	*28.3*
	55 – 64	10	*23.3*	18	*28.6*	28	*26.4*
	65+	11	*25.6*	16	*25.4*	27	*25.5*
	Total	**43**		**63**		**106**	
Urban	15 – 24	2	*4.8*	6	*7.7*	8	*6.7*
	25 – 34	7	*16.7*	9	*11.5*	16	*13.3*
	35 – 44	4	*9.5*	18	*23.1*	22	*18.3*
	45 – 54	14	*33.3*	12	*15.4*	26	*21.7*
	55 – 64	11	*26.2*	19	*24.4*	30	*25.0*
	65+	4	*9.5*	14	*17.9*	18	*15.0*
	Total	**42**		**78**		**120**	
Rural + Urban (weighted percentages)	15 - 24		*4.7*		*5.7*		*5.3*
	25 - 34		*9.9*		*9.0*		*9.2*
	35 - 44		*6.1*		*13.6*		*10.7*
	45 - 54		*34.4*		*21.3*		*26.3*
	55 – 64		*24.1*		*27.3*		*26.0*
	65+		*20.8*		*23.2*		*22.4*

fever as an additional symptom were more among males compared to females in both rural and urban areas. The relevant figures were 64.8% Vs 52.8% (rural) and 60.0% Vs 51.3% (urban). Much higher proportion of rural males had chest pain (68.5%) compared to urban females (41.7%).

3.10.2 ***Duration of Cough***: Table 15A shows the duration of cough among CS by age and sex. **Cough of duration more than one year (53+ weeks) was reported by 42.2% in rural areas and 49.0% in urban areas**. This proportion was slightly higher among females as compared to males in both rural and urban areas. There were two peak durations for all the 10 groups formed according to rural/urban, sex and age. For all of them, the second peak was at 53+ weeks. For six of them, the first peak was at 14-26 weeks, for three at 1-13 weeks and for the remaining one group at the combined duration of 1-26 weeks.

3.10.3 ***Average duration of cough*** : The average duration of cough was 34.8 weeks for females and 39.6 weeks for males, in rural areas. The corresponding figures for urban areas were 40.5 and 36.9 weeks respectively. Thus, the **average duration of cough was less among rural females compared to urban females**. The average duration of cough in rural areas was smaller in age group 15-34 (27.5 weeks) compared to those in 35-54 (39.4 weeks) and 55+ (39.2 weeks). **In urban areas, the average duration of cough steadily increased with age** from 34.9 weeks in 15-34 to 37.3 weeks in 35-54 and to 41.2 weeks in 55+ age group.

3.10.4 ***Occurrence of Chest Pain, by Age :*** Proportion of rural CS having chest pain was less in 35-54 age group (53.6%) compared to those in 15-34 (58.3%) and 55+ (60.0%). Among urban CS, this proportion was more in age group 15-34 (65.0%) compared to those in 35-54 (60.0%) and 55+ (59.0%). Proportion of rural CS having chest pain was much less among females (41.7%) compared to males (68.5%). This proportion did not differ between urban females (61.5%) and males (60.0%).

Table 15A

Duration of cough among CS by age and sex in rural and urban areas (Raichur district)

Area	Sex / age	Total No.	Duration in weeks									
			1 – 13		14 – 26		27 – 39		40 – 52		53+	
			No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Rural	F	36	8	*22.2*	7	*19.4*	1	*2.8*	4	*11.1*	16	*44.4*
	M	54	4	*7.4*	12	*22.2*	2	*3.7*	14	*25.9*	22	*40.7*
	T	90	12	*13.3*	19	*21.1*	3	*3.3*	18	*20.0*	38	*42.2*
	15 – 34	12	2	*16.7*	6	*50.0*	0	*0.0*	2	*16.7*	2	*16.7*
	35 – 54	28	4	*14.3*	4	*14.3*	2	*7.1*	3	*10.7*	15	*53.6*
	55+	50	6	*12.0*	9	*18.0*	1	*2.0*	13	*26.0*	21	*42.0*
Urban	F	39	4	*10.3*	7	*17.9*	1	*2.6*	7	*17.9*	20	*51.3*
	M	65	14	*21.5*	9	*13.8*	1	*1.5*	10	*15.4*	31	*47.7*
	T	104	18	*17.3*	16	*15.4*	2	*1.9*	17	*16.3*	51	*49.0*
	15 – 34	20	6	*30.0*	1	*5.0*	1	*5.0*	4	*20.0*	8	*40.0*
	35 – 54	45	8	*17.8*	9	*20.0*	0	*0.0*	5	*11.1*	23	*51.1*
	55+	39	4	*10.3*	6	*15.4*	1	*2.6*	8	*20.5*	20	*51.3*

F - Females M - Males T - Total (both sexes)

3.10.5 ***CS without Chest Pain***: **Proportion without chest pain** was 42.2% among rural CS and 39.4% among urban CS. While it did not differ between urban females (38.5%) and males (40.0%), it **was higher among rural females (58.3%) compared to rural males (31.5%)**

3.10.6 ***Duration of Chest pain***: Duration of chest pain among CS by age and sex for rural and urban areas is shown in Table 16A. The pattern closely resembles that for duration of cough. Two peaks, one at 14-26 weeks and the other at 53+ weeks is the common pattern. The only exceptions were for the first peak at 1-13 weeks for three of the 10 groups and at the combined duration of 1-26 weeks for two groups. Chest pain of duration more than one year was less (21.1%) in rural areas compared to 32.7% in urban areas. This proportion was lower among females compared to males, in rural areas.

3.10.7 ***Average duration of Chest pain:*** The average duration of chest pain was almost same in both rural and urban areas (20.3 weeks and 23.3 weeks respectively). While the average duration among rural CS was less for females (13.4 weeks) compared to males (24.9 weeks), it was the opposite among urban CS - 25.8 weeks for females and 21.8 weeks for males. **Among rural CS, average duration increased steadily with increase in age** from 14.8 weeks in age group 15-34 to 19.6 weeks in 35.54 and to 22.0 weeks in 55+. There was **no such trend among urban CS** and average duration varied from 22.0 weeks in age group 35-54 to 25.7 weeks only in 15-34.

3.10.8 ***Occurrence of Fever by Age:*** Among rural CS, the proportion having fever did not differ much between age groups 35-54 (78.6%) and 15-34 (75.0%) but was much less in 55+ (48.0%). Urban CS had the opposite picture with the highest proportion in age group 55+ (61.5%) and much less in age group 15-34 (55.0%) and 35-54 (51.1%). While this proportion was much less in age group 55+ among rural CS compared to urban CS,

Table 16A

Duration of chest pain among CS by age and sex in rural and urban areas (Raichur district)

Area	Sex / age	Total No.	Duration in weeks									
			1 – 13		14 – 26		27 – 39		40 – 52		53+	
			No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Rural	F	36	4	*11.1*	3	*8.3*	1	*2.8*	1	*2.8*	6	*16.7*
	M	54	4	*7.4*	10	*18.5*	2	*3.7*	8	*14.8*	13	*24.1*
	T	90	8	*8.9*	13	*14.4*	3	*3.3*	9	*10.0*	19	*21.1*
	15 – 34	12	2	*16.7*	3	*25.0*	0	*0.0*	0	*0.0*	2	*16.7*
	35 – 54	28	1	*3.6*	5	*17.9*	1	*3.6*	2	*7.1*	6	*21.4*
	55+	50	5	*10.0*	5	*10.0*	2	*4.0*	7	*14.0*	11	*22.0*
Urban	F	39	2	*5.1*	4	*10.3*	1	*2.6*	3	*7.7*	14	*35.9*
	M	65	8	*12.3*	7	*10.8*	1	*1.5*	3	*4.6*	20	*30.8*
	T	104	10	*9.6*	11	*10.6*	2	*1.9*	6	*5.8*	34	*32.7*
	15 – 34	20	2	*10.0*	2	*10.0*	0	*0.0*	2	*10.0*	7	*35.0*
	35 – 54	45	6	*13.3*	4	*8.9*	1	*2.2*	1	*2.2*	15	*33.3*
	55+	39	2	*5.1*	5	*12.8*	1	*2.6*	3	*7.7*	12	*30.8*

for the other two age groups it was much less among urban CS compared to rural CS.

3.10.9 ***CS without Fever:*** Among the CS, 38.9% in rural areas and 44.2% in urban areas **did not have fever** as an additional symptom. **This proportion was higher In females** compared to males, the corresponding figures being 44.4% and 35.2% respectively in rural areas and 48.7% and 41.5% respectively in urban areas. This higher figure for females among rural CS is similar to that for chest pain (refer para 3.10.5).

3.10.10 ***Duration of Fever :*** Duration of fever by age and sex in rural and urban areas is shown in Table 17A. The two peaks observed for durations of cough and chest pain with the second peak at age 55+ was also observed in the case of fever. But, the first peak was at 14-26 weeks for only three out of the 10 groups, at 1-13 weeks for six groups and at the combined duration of 1-26 weeks for one group. The **proportion having fever for more than one year was less among rural CS** (18.9%) compared to that among urban CS (24.0%). This proportion was higher among rural CS for females (22.2%) compared to that for males (16.7%) but about the same (25.6%) and 23.1% respectively) among urban CS. Table 15A, 16A and 17A together show that the **proportion of CS with any of these three symptoms for more than one year was higher among female CS than male CS except for chest pain among rural CS**.

3.10.11 ***Average duration of Fever::*** The average duration of fever was almost the same among females and males in both rural and urban areas. The corresponding figures were : 16.8 weeks and 18.8 weeks respectively in rural areas and 19.3 weeks and 20.3 weeks respectively in urban areas. Among rural CS, the highest average duration of fever (24.7 weeks) was observed for age 35-54. It was 16.4 weeks in age group 15-34 and 14.6 weeks in age group 55+. **Among urban CS, average duration of fever increased steadily with increase in age** from 14.4 weeks in age group 15-34 to 18.3 weeks in 35-54 and 24.7 in 55+.

Table 17A

Duration of fever among CS by age and sex in rural and urban areas (Raichur district)

Area	Sex / age	Total No.	Duration in weeks									
			1 – 13		14 – 26		27 – 39		40 – 52		53+	
			No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Rural	F	36	8	*22.2*	2	*5.6*	0	*0.0*	2	*5.6*	8	*22.2*
	M	54	10	*18.5*	10	*18.5*	0	*0.0*	6	*11.1*	9	*16.7*
	T	90	18	*20.0*	12	*13.3*	0	*0.0*	8	*8.9*	17	*18.9*
	15 – 34	12	3	*25.0*	4	*33.3*	0	*0.0*	1	*8.3*	1	*8.3*
	35 – 54	28	7	*25.0*	4	*14.3*	0	*0.0*	2	*7.1*	9	*32.1*
	55+	50	8	*16.0*	4	*8.0*	0	*0.;0*	5	*10.0*	7	*14.0*
Urban	F	39	2	*5.1*	6	*15.4*	0	*0.0*	2	*5.1*	10	*25.6*
	M	65	11	*16.9*	3	*4.6*	1	*1.5*	8	*12.3*	15	*23.1*
	T	104	13	*12.5*	9	*8.7*	1	*1.0*	10	*9.6*	25	*24.0*
	15 – 34	20	5	*25.0*	1	*5.0*	1	*5.0*	1	*5.0*	3	*15.0*
	35 – 54	45	5	*11.1*	4	*8.9*	0	*0.0*	4	*8.9*	10	*22.2*
	55+	39	3	*7.7*	4	*10.3*	0	*0.0*	5	*12.8*	12	*30.8*

3.10.12 ***Occurrence of Haemoptysis***: Additional symptom of haemoptysis was not reported by 87.8% of rural CS and 80.8% of urban CS. **This proportion did not differ between males and females** in both rural and urban areas, the relevant figures being 87.0% and 88.9% respectively in rural areas and 80.0% and 82.1% respectively in urban areas. Proportion of CS without haemoptysis was highest in age group in 35-54 in rural areas (96.4%). It was 83.3% in age group 15-34 and 84.0% in age 55+. In urban areas, it was least in 55+ age group (76.9%), with 85.0% in 15-34 and 82.2% in 35-54. Among those having haemoptysis, three times or more was most common for (63.6%) among rural CS-50.0% for females and 71.4% for males. Among urban CS, this proportion was less among females (71.4%) compared to males (76.9%), the overall proportion being 75.0%. But these percentages are based on very small number of CS with haemoptysis (4 for rural females, 7 each for rural males and urban females, 11 for total rural CS, 13 for urban males and 20 for total urban CS). Analysis by age is not presented because of small numbers.

3.10.13 ***Occurrence and duration of loss of weight***. Loss of weight was not reported by 76.7% of rural CS and 69.2% of urban CS. Differences between males and females were small in rural areas (77.8% and 75.0%). This proportion was more among urban females (76.9%) compared to males (64.6%). In rural areas, the proportion of CS without loss of weight was least (66.7%) in age group 15-34 and highest (82.1%) in 35-54 age group, with 55+ age group in between (76.0%). In urban areas, it was about 75% in age groups 15-34 and 35-54 but lower (59.0%) in 55+ age group. Among the nine rural female CS who had reported loss of weight, the duration was 53+ weeks for five and 40-52 weeks for four. Out of 12 rural male CS five (41.7%) had duration of 53+ weeks, four (33.3%) 40-52 weeks and two (16.7%) 1-13 weeks. Among the nine urban female CS, duration was 53+ weeks for six and 40-52 weeks for three. Out of 23 urban male CS, 12 (52.2%) had duration of 53+ weeks, five (21.7%) 1-13 weeks and four (17.4%) 40-52 weeks. Those having loss of weight even

in the combined age groups were too small in numbers to study the duration pattern among different age groups in rural and urban areas.

3.10.14 ***Average duration for loss of weight :*** This did not differ between rural females (10.8 weeks) and males (8.9 weeks) as well as between urban females (11.7 weeks) and males (13.9 weeks). In rural areas, the smallest average duration for loss of weight (7.3 weeks) was observed for age group 35-54. That for age group 15-34 was 10.4 weeks and for 55+ age group 10.8 weeks. In urban areas, age group 55+ had the highest average duration for weight loss (19.5 weeks), with the other two age groups having average durations of 8.9 and 9.4 weeks.

3.10.15 ***Occurrence and duration of Night Sweat :*** Night sweat was not reported by 70.1% in rural areas and 76.9% in urban areas. The differences between males and females were small in both areas. Among the rural CS having night sweat, the duration with the highest frequency was for 1-13 weeks and 53+ weeks (36.4% each) for females. Next in frequency was 40-52 and 53+ weeks for males (33.3% each). Among urban CS, the highest frequency was for 53+ weeks for females (77.8%) followed by 53+ weeks for males (60.0%) and 40-52 weeks for males (20.0%). The numbers with night sweat were too small even in the combined age groups for studying the duration pattern for different age groups in rural and urban areas. The average duration of night sweat did not differ between rural / urban and male/female CS (9.3 weeks to 10.8 weeks). Among rural CS, it was least in age group 35-54 (8.0 weeks) but did not differ between the other two age groups (10.4 and 10.8 weeks). Among urban CS, it was least in 15-34 (7.6 weeks) but did not differ between the other two age groups (10.6 and 11.7 weeks).

3.11 <u>Initial Symptoms</u>

3.11.1 In rural areas, **cough alone was the most common initial symptom (21.1%) followed by cough, chest pain and fever (18.9%), cough and chest pain (17.8%) cough and fever (16.7%)** which together accounted for 74.5% of CS. In urban areas also cough alone was the most common initial symptom (31.1%) but was followed by cough and chest pain (21.4%), cough and fever (18.4%) and cough, chest pain and fever 7.8%.

3.12 <u>Actions taken by CS</u>

3.12.1 ***Number of Actions :*** Out of 90 **rural CS interviewed, 9 (10.0%) did not take any action, 33 (36.7%) took one action, 31 (34.4%) took two actions, 13 (14.4%) took three actions**, 4 (4.4%) took four actions and no one took more than four actions. Among the 104 **urban CS interviewed, 16 (15.4%) did not take any action,** 44 (42.3%) took one action, 23 (22.1%) took two actions, 13 (12.5%) took three actions, 7 (6.7%) took four actions and one (1.0%) took five actions.

3.12.2 ***Influencing factors considered***: The possible influence of some factors on the number of actions taken is studied in the following paragraphs. The intention was to study the possible influence of some other factors also like education levels of the CS and his/her HOH. But the vast majority of the CS and their HOH were illiterate, leaving small numbers only under "below SSC" and "SSC+". Because of the small number of CS taking more than four actions, these have been clubbed with four actions to form a combined group of four or more actions. While interpreting the percentages and averages given for the urban areas, it has to be remembered that some of these are based on small number of CS.

3.12.3 ***Influence of duration of cough***: Table 18A indicates the influence of duration of cough on the number of actions taken by rural and urban CS. **The average number of actions taken did not differ much for different**

Table 18A

Influence of duration of cough on the number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentage of CS with different durations of cough taking each no. of action							
	Rural				Urban			
	3 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53 + weeks	3 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53 + weeks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0	0.0	10.5	0.0	18.4	22.2	18.8	21.1	9.8
1	58.3	26.3	52.4	26.3	50.0	62.5	31.6	37.3
2	33.3	57.9	33.3	23.7	22.2	18.8	31.6	19.3
3	8.3	5.3	14.3	21.1	0.0	0.0	5.3	23.5
4+	0.0	0.0	0.0	10.5	5.6	0.0	10.5	9.8
No. of CS	**12**	**19**	**21**	**38**	**18**	**16**	**19**	**51**
Mean no. of actions	***1.5***	***1.6***	***1.6***	***1.8***	***1.2***	***1.0***	***1.5***	***1.9***

Table 19A

Influence of duration of chest pain on the number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentages of CS with different durations of chest pain taking each no. of action									
	Rural					Urban				
	0 weeks	1 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53+ weeks	0 weeks	1 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53+ weeks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
0	7.9	0.0	7.7	0.0	26.3	17.1	20.0	27.3	0.0	11.8
1	47.4	50.0	23.1	41.7	15.8	53.7	60.0	45.5	37.5	23.5
2	34.2	37.5	61.5	33.3	15.8	22.0	20.0	27.3	25.0	20.6
3	5.3	12.5	7.7	25.0	31.6	4.9	0.0	0.0	12.5	29.4
4+	5.3	0.0	0.0	0.0	10.5	2.4	0.0	0.0	25.0	14.7
No of CS	**38**	**8**	**13**	**12**	**19**	**41**	**10**	**11**	**8**	**34**
Mean no. of actions	***1.5***	***1.6***	***1.7***	***1.8***	***1.8***	***1.2***	***1.0***	***1.0***	***2.2***	***1.2***

Note : Some of these percentages, particularly urban, are based on small numbers.

3.11 **Initial Symptoms**

3.11.1 In rural areas, **cough alone was the most common initial symptom (21.1%) followed by cough, chest pain and fever (18.9%), cough and chest pain (17.8%) cough and fever (16.7%)** which together accounted for 74.5% of CS. In urban areas also cough alone was the most common initial symptom (31.1%) but was followed by cough and chest pain (21.4%), cough and fever (18.4%) and cough, chest pain and fever 7.8%.

3.12 **Actions taken by CS**

3.12.1 ***Number of Actions :*** Out of 90 **rural CS interviewed, 9 (10.0%) did not take any action, 33 (36.7%) took one action, 31 (34.4%) took two actions, 13 (14.4%) took three actions**, 4 (4.4%) took four actions and no one took more than four actions. Among the 104 **urban CS interviewed, 16 (15.4%) did not take any action,** 44 (42.3%) took one action, 23 (22.1%) took two actions, 13 (12.5%) took three actions, 7 (6.7%) took four actions and one (1.0%) took five actions.

3.12.2 ***Influencing factors considered***: The possible influence of some factors on the number of actions taken is studied in the following paragraphs. The intention was to study the possible influence of some other factors also like education levels of the CS and his/her HOH. But the vast majority of the CS and their HOH were illiterate, leaving small numbers only under "below SSC" and "SSC+". Because of the small number of CS taking more than four actions, these have been clubbed with four actions to form a combined group of four or more actions. While interpreting the percentages and averages given for the urban areas, it has to be remembered that some of these are based on small number of CS.

3.12.3 ***Influence of duration of cough***: Table 18A indicates the influence of duration of cough on the number of actions taken by rural and urban CS. **The average number of actions taken did not differ much for different**

Table 18A

Influence of duration of cough on the number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentage of CS with different durations of cough taking each no. of action							
	Rural				Urban			
	3 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53 + weeks	3 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53 + weeks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0	0.0	10.5	0.0	18.4	22.2	18.8	21.1	9.8
1	58.3	26.3	52.4	26.3	50.0	62.5	31.6	37.3
2	33.3	57.9	33.3	23.7	22.2	18.8	31.6	19.3
3	8.3	5.3	14.3	21.1	0.0	0.0	5.3	23.5
4+	0.0	0.0	0.0	10.5	5.6	0.0	10.5	9.8
No. of CS	**12**	**19**	**21**	**38**	**18**	**16**	**19**	**51**
Mean no. of actions	***1.5***	***1.6***	***1.6***	***1.8***	***1.2***	***1.0***	***1.5***	***1.9***

Table 19A

Influence of duration of chest pain on the number of actions taken by rural and urban CS (Mysore district)

Action No.	Percentages of CS with different durations of chest pain taking each no. of action									
	Rural					Urban				
	0 weeks	1 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53+ weeks	0 weeks	1 – 13 weeks	14 – 26 weeks	27 – 52 weeks	53+ weeks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
0	7.9	0.0	7.7	0.0	26.3	17.1	20.0	27.3	0.0	11.8
1	47.4	50.0	23.1	41.7	15.8	53.7	60.0	45.5	37.5	23.5
2	34.2	37.5	61.5	33.3	15.8	22.0	20.0	27.3	25.0	20.6
3	5.3	12.5	7.7	25.0	31.6	4.9	0.0	0.0	12.5	29.4
4+	5.3	0.0	0.0	0.0	10.5	2.4	0.0	0.0	25.0	14.7
No of CS	**38**	**8**	**13**	**12**	**19**	**41**	**10**	**11**	**8**	**34**
Mean no. of actions	***1.5***	***1.6***	***1.7***	***1.8***	***1.8***	***1.2***	***1.0***	***1.0***	**2.2**	***1.2***

Note : Some of these percentages, particularly urban, are based on small numbers.

durations of cough in rural and urban areas. The proportion not taking any action among rural CS fluctuated with increase in the duration of cough. This proportion showed a declining trend in urban areas but for a drop in the average for 14-26 weeks. For all durations, the largest percentage took one action except for 14-26 weeks (rural) for which two actions were frequent. For 27-52 weeks (urban), one and two actions were equally frequent. Generally, two actions were also quite common. Among rural CS, four or more actions were taken only by those with duration of 53+ weeks.

3.12.4 ***Influence of duration of Chest pain***: The average number of actions taken by CS with different durations of chest pain did not show any trend in rural and urban areas (Table 19A). But, urban CS with duration of 27.52 weeks had a higher average compared to other durations. Among the rural CS, the percentage not taking any action fluctuated with increase in the duration of chest pain. As in the case of duration of cough, the largest percentage of CS with chest pain of all durations took one action except for 14-26 weeks (rural) and 53+ weeks (urban). While the largest frequency was for two actions for the former, it was for three actions for the latter. Generally, two actions were also quite common.

3.12.5 ***Comparison of Influence of cough and chest pain***: A comparison of Tables 18A and 19A shows that neither duration of cough nor duration of chest pain had any appreciable influence on the number of actions taken.

3.12.6 ***Influence of Age :*** Among the rural and urban CS, the percentage not taking any action was highest in age group 35-54 (Table 20A). While two actions had the highest frequency (58.3%) among rural CS of age 15-34, one action was most frequent among CS of age 55+ (42.0%) and one and two actions were equally frequent in 35-54 (32.1%). One action was most frequent among urban CS of all the three age groups, this being highest in age 55+ (48.7%) compared to 37.8% and 40.0% for the other two age

Table 20A

Influence of age on the number of actions taken by rural urban CS (Raichur district)

Action No.	Percentage of CS different age groups taking each no. of action					
	Rural			Urban		
	15 – 34 yrs	35 – 54 yrs	55 + yrs	15 – 34 yrs	35 – 54 yrs	55+ yrs
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	0.0	14.3	10.0	15.0	17.8	12.8
1	25.0	32.1	42.0	40.0	37.8	48.7
2	58.3	32.1	30.0	20.0	24.4	20.5
3	8.3	17.9	14.0	15.0	11.1	12.8
4+	8.3	3.6	4.0	10.0	8.9	5.1
No. of CS	**12**	**28**	**50**	**20**	**45**	**39**
Mean no. of actions	***2.0***	***1.6***	***1.6***	***1.7***	***1.6***	***1.5***

Table 21A

Influence of sex on the number of actions taken by rural and urban CS (Raichur district)

Action No.	Percentage of male and female CS taking each no. of action			
	Rural		Urban	
	Female	Male	Female	Male
(1)	(2)	(3)	(4)	(5)
0	2.8	14.8	10.3	18.5
1	41.7	33.3	43.6	41.5
2	36.1	33.3	23.1	21.5
3	13.9	14.8	20.5	7.7
4+	5.6	3.7	2.6	10.7
No. of CS	**36**	**54**	**39**	**65**
Mean no. of actions	***1.8***	***1.6***	***1.6***	***1.5***

groups. The average number of actions taken was higher among CS of age 15-34 (2.0) compared to those of the two higher age groups in rural areas (1.6 each). Among urban CS, the average was the same for all three age groups (1.5 to 1.6). Thus, **age of the CS appear to influence both "not taking action" and number of actions taken**.

3.12.7 ***Influence of Sex :*** Table 21A studies the influence of sex of the CS on the number of actions taken. **There is hardly any difference in the average number of actions taken by males and females in both rural and urban areas**. Among the rural CS, the proportion not taking action was smaller for females (2.8%) compared to males (14.8%). The largest frequency among rural females was for one action (41.7%) followed by two actions (36.1%). Among males 33.3% each took one and two actions. Among urban CS also, proportion not taking action was less for females (10.3%) compared to males (18.5%). The largest frequency was observed for one action followed by two actions, among males and females.

3.12.8 ***Influence of type of Family:*** The proportion taking no action among CS belonging to nuclear families was higher compared to joint families in rural areas (Table 22A). Largest percentage among rural joint families and both types of urban families took one action followed by two actions but their relative positions were reversed among rural nuclear families. The **average number of actions taken did not differ much between the two types of families in both rural and urban areas** (1.4 to 1.7). The number of CS in extended families was too small for any worthwhile comparison.

3.12.9 ***Influence of Occupation :*** The percentage not taking action was least among housewives and highest among the employed, in both rural and urban areas (Table 23A). That for unemployed and students was one of the highest for rural CS. Among employed and unemployed and students,

Table 22A

Influence of type of family on number of actions taken by rural and urban CS (Raichur district)

Action No.	Percentage of CS in different types of families Taking each no. of action			
	Rural		Urban	
	Nuclear	Joint	Nuclear	Joint
(1)	(2)	(3)	(4)	(5)
0	18.5	6.9	15.2	14.8
1	33.3	39.7	37.0	46.3
2	37.0	32.8	26.1	20.4
3	11.1	13.8	10.9	13.0
4+	0.0	6.9	10.9	5.6
No. of CS	**27**	**58**	**46**	**54**
Mean no. of actions	***1.4***	***1.7***	***1.7***	***1.5***

Note : Extended families are not included in this table because of small numbers.

Table 23A

Influence of occupation on the number of actions taken by rural and urban CS (Raichur district)

Action No.	Percentage of CS in different occupation groups taking each no. of action					
	Rural			Urban		
	Unemployed and students	Housewives	Employed	Unemployed and students	Housewives	Employed
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	10.7	6.7	10.6	15.0	8.3	18.3
1	39.3	20.0	40.4	45.0	45.8	40.0
2	32.1	40.0	34.0	20.0	20.8	23.3
3	14.3	20.0	12.8	15.0	25.0	6.7
4+	3.6	13.3	2.1	5.0	0.0	11.7
No. of CS	**28**	**15**	**47**	**20**	**24**	**60**
Mean no. of actions	***1.6***	***2.1***	***1.6***	***1.5***	***1.6***	***1.6***

one action was more common in rural areas followed by two actions. But, housewives showed the opposite pattern with more of them taking two actions. Among urbans CS, one action was most common for all the three occupation groups. The percentage taking one action was more for housewives and unemployed and students compared to that among rural CS (the former being more than double) and equal for employed. The average number of actions taken did not differ much among the three groups in urban areas. It was somewhat higher among rural housewives (2.1) compared to employed and unemployed and students (1.6 each).

3.12.10 ***Influence of highest level of Education in HH :*** The influence of the highest level of education in HH is studied in Table 24A. The percentage not taking action was lower among rural CS living in HHs with the highest education level below SSC and SSC or more (8.6.% and 7.7%) compared to 15.4% for those in HHs with only illiterates. **Among urban CS, this percentage declined steadily from (23.1%) for the illiterates group to 18.9% for below SSC group and to nil for SSC+ group.** The maximum frequency among rural CS was observed for two actions for SSC+ group (46.2%) and illiterates group (38.5%) and for one action for below SSC group (37.1%). Among urban CS, maximum frequency was for one action for all the three groups with that for SSC+ group (52.0%) being more than that for below SSC group (39.6%) and illiterates group (38.5%). The average number of actions taken by CS living in rural HHs with different highest levels of education did not differ much (1.5 to 1.8). The average number of actions taken by the urban CS increased with increase in the highest level of education in the HH from 1.4 to 1.5 and to 1.8 but differences were too small.

3.12.11. ***Influence of Religion and Caste :*** Average number of actions taken was highest for BCs among rural CS and lowest for Other Hindus among urban CS (Table 25A). But, the differences were small (varying from 1.3 to 1.9). One action was most common for five of the eight groups shown in

Table 24A

Influence of the highest education level in the HH on the number of actions taken by rural and urban CS (Raichur district)

Action No.	Percentage of CS in different highest education levels in HH taking each no. of action					
	Rural			Urban		
	Illiterate	Below SSC	SSC+	Illiterates	Below SSC	SSC+
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	15.4	8.6	7.7	23.1	18.9	0.0
1	34.6	37.1	42.3	38.5	39.6	52.0
2	38.5	25.7	46.2	23.1	20.8	24.0
3	7.7	22.9	11.5	7.7	11.3	20.0
4+	3.8	5.7	3.8	7.7	9.4	4.0
No. of CS	**26**	**35**	**29**	**26**	**53**	**25**
Mean no. of actions	***1.5***	***1.8***	***1.7***	***1.4***	***1.5***	***1.8***

Note : Percentages in col 5 are based on small numbers.

Table 25A

Influence of Religion and Caste on the number of actions taken by rural and urban CS (Raichur District)

No. of Actions	Percentage of CS in different religion and caste groups taking different no. of actions							
	Rural				Urban			
	SC/ST	BCs	Other Hindus	Muslims	SC/ST	BCs	Other Hindus	Muslims
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0	16.7	8.3	0.0	0.0	15.6	17.4	14.3	13.8
1	35.7	29.2	38.5	54.5	42.2	26.1	71.4	48.3
2	23.8	37.5	61.5	36.4	22.2	39.1	0.0	13.8
3	19.0	16.7	0.0	9.1	8.9	13.0	0.0	20.7
4+	4.8	8.3	0.0	0.0	11.1	4.3	14.3	3.5
No. of CS	**42**	**24**	**13**	**11**	**45**	**23**	**7**	**29**
Mean no. of actions	***1.6***	***1.9***	***1.6***	***1.5***	***1.6***	***1.6***	***1.3***	***1.5***

the Table. Of the other three groups, for BCs and Other Hindus (both rural) and BCs (urban) highest frequency was for two actions. No action by rural CS was most common among SC/ST (16.7%) followed by BCs (8.3%) and Other Hindus and Muslims (0.0% each). Among urban CS, no action was most frequent among BCs (17.4%) and least among Muslims (13.8%).

3.12.12 ***Influence of Family Size :*** Among rural CS, **proportion not taking action steadily decreased with increase in family size** from 15.4% for size 1-3 to 0.0% for size 10+ (Table 26A). This proportion steadily decreased among urban CS also for sizes 1-3, 4-6 and 7-9 but increased for size 10+. Among rural CS, for those of family size 1-3 and 10+, two actions were most common followed by one action. For the other groups, one action was most frequent. Among urban CS, one action was most common for all family size groups. Average number of actions by rural CS varied from 1.5 for sizes 1-3 and 4-6 to 2.0 for size 10+. Among urban CS, it ranged from 0.9 for size 1-3 to 1.6 for size 4-6 and to 1.7 each for size 7-9 and 10+.

3.13 <u>Details for each action</u>

3.13.1 ***Symptoms present at the time of each action :*** The distribution of CS by symptoms present at the time of each action is shown in Table 27A. The proportion having cough with haemoptysis increased steadily with number of actions in urban areas. There was no such trend in rural areas but this proportion was higher for action 3 (17.6%) but equal for actions 1 and 2 (4.9% and 4.2%). Among the five groups without haemoptysis, the frequency was highest for all three actions by rural and urban CS for cough and one more symptom. The second largest frequency was for cough alone for some actions and cough and two more symptoms for other actions. Percentages of urban CS with cough and one more symptom and cough alone decreased steadily with increase in the number of actions but for the latter the decrease from action2 to action 3 was too

Table 26A

Influence of Family size on the number of actions taken by rural and urban CS (Raichur District)

No. of Actions	Percentage of CS in different family size taking difference no. of actions							
	Rural				Urban			
	1-3	4-6	7-9	10+	1-3	4-6	7-9	10+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0	15.4	12.1	10.0	0.0	25.0	17.2	7.7	16.7
1	30.8	39.4	40.0	28.6	62.5	41.4	42.3	33.3
2	38.5	36.4	26.7	42.9	12.5	19.0	30.8	25.0
3	15.4	9.1	13.3	28.6	0.0	13.8	11.5	16.7
4+	0.0	3.0	10.0	0.0	0.0	8.6	7.7	8.3
No. of CS	**13**	**33**	**30**	**14**	**8**	**58**	**26**	**12**
Mean no. of actions	***1.5***	***1.5***	***1.7***	***2.0***	***0.9***	***1.6***	***1.7***	***1.7***

Table 27A

Distribution of CS by symptoms present at each action (Raichur district)

Symptoms	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Cough with haemoptysis (with or without other symptoms)	4	*4.9*	2	*4.2*	3	*17.6*	9	*10.2*	11	*25.0*	6	*28.6*
2. Without haemoptysis and with												
a) Cough alone	17	*21.0*	10	*20.8*	5	*29.4*	25	*28.4*	7	*15.9*	3	*14.3*
b) Cough & 1 more symptom	34	*42.0*	17	*35.4*	6	*35.3*	38	*43.2*	15	*34.1*	5	*23.8*
c) Cough & 2 more symptoms	17	*21.0*	11	*22.9*	0	*0.0*	9	*10.2*	8	*18.2*	4	*19.0*
d) Cough & 3 more symptoms	7	*8.6*	4	*8.3*	2	*11.8*	6	*6.8*	3	*6.8*	2	*9.5*
e) Cough & 4 more symptoms	2	*2.5*	4	*8.3*	1	*5.9*	1	*1.1*	0	*0.0*	1	*4.8*
Total	**81**		**48**		**17**		**88**		**44**		**21**	

small. On the other hand, percentage with cough and two more symptoms increased from 10.2% for action 1 to 18.2% for action 2 and to 19.0% for action 3, but the increase from action 2 to action 3 was too small.

3.13.2 ***Interval between onset of symptoms and first action :*** The first action was taken by 37.0% of rural CS and 29.5% of urban CS after an interval of 1-7 days from the onset of symptoms (Table 28A). **It is significant that 24.7% of rural CS and 28.4% of urban CS had acted only after 30 days. The proportion who took the first action within 15 days was 59.2% (rural) and 54.5% (urban).** The average interval from onset of symptoms to first action was 32 days for rural CS and 70 days for urban CS. This may at least partly be due to the average interval being affected to a larger extent by extreme values in urban areas compared to rural areas. Yet, it is surprising that, **despite the availability of health facilities within easy reach, more urban CS had delayed their first action.**

3.13.3 ***Interval between onset of symptoms and second action :*** The second action was taken by 14.6% of rural CS and 13.6% of urban CS within 30 days. The second action was taken by about 50-60% of the CS in both areas by 150 days. But, 38.6% of urban CS took second action only after 210 days compared to 22.9% of rural CS. Consequently, the average interval between onset of symptoms and second action also was less for rural CS (145 days) compared to urban CS (196 days). This again shows delay in taking action by urban CS. It is significant that **only less than 15% of rural and urban CS had taken the second action within 30 days and less than 40% within 90 days**.

3.13.4 ***Interval between onset of symptoms and third action :*** On the average, the **third action was taken after 290 days by rural CS and 301 days by urban CS**. Less than 10% of rural and urban CS had taken the

Table 28A

Interval between onset of symptoms and different actions (Raichur district)

Action No.	Interval for action (days)	Rural				Urban			
		No. of CS taking this action	Percent of CS	Cum percent of CS	Mean interval (days)	No. of CS taking this action	Percent of CS	Cum percent of CS	Mean interval (days)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	1 – 7	81	37.0		32	88	29.5		70
	8 – 15		22.2	59.2			25.0	54.5	
	16 – 30		16.0	75.2			17.0	71.5	
	31+		24.7	100.0			28.4	100.0	
2	1 – 30	48	14.6		145	44	13.6		196
	31 – 60		8.3	22.9			11.4	25.0	
	61 – 90		14.6	37.5			13.6	38.6	
	91 – 150		22.9	60.4			13.6	52.2	
	151 – 210		16.7	77.1			9.1	61.3	
	211+		22.9	100.0			38.6	100.0	
3	1 – 60	17	5.9		290	21	9.5		301
	61 – 90		0.0	5.9			4.8	14.3	
	91 – 150		11.8	17.7			4.8	19.1	
	151 – 210		11.8	29.5			9.5	28.6	
	211 – 270		5.9	35.4			0.0	28.6	
	271 – 360		17.6	53.0			9.5	38.1	
	361+		47.1	100.0			61.9	100.0	

third action within 60 days. Only less than 20% had taken the third action within 150 days. But a smaller proportion of rural CS took more than 360 days for third action (47.0%) compared to urban CS (61.9%). However, the wide gap in the average interval between rural and urban CS for second action was reduced for third action.

3.13.5 ***Type of Health facilities visited for First Action :*** **In rural areas, 93.8% of the first action was visits to primary level health facilities** (92.6% to PMP and 1.2% to PHC) (Table 29A). The corresponding figures for urban areas were 70.4%, 69.3% and 1.1% respectively. This reduction in visits to primary level facilities in urban areas was compensated by more frequent use of secondary level general health facilities - 26.1% (urban) compared to 3.7% (rural). More than 80% of this secondary level use by urban CS and 100% by rural CS was of GH. First action by visiting specialised facilities was nil for sanatorium and DTC by both rural and urban CS, except for two urban CS visiting sanatorium.

3.13.6 ***Type of Health facilities visited for second action :*** **For the second action, the use of primary level facilities was less but still quite high - 83.4% (rural) and 65.9% (urban).** The rural CS made much more use of PMP (81.3%) compared to PHC (2.1%). Among rural CS, 14.6% made use of secondary level facilities for the second action, showing an increased use (from 3.7% for first action). There was no such increase among urban CS. While the share of GH was the same in urban areas, it was reduced to 56.8% in rural areas, showing a decreased use of GH and increased use of NGH for second action. Use of specialised facilities for second action rose from 0.0% to 2.1% among rural CS. The rise was steeper among urban CS from 2.3% to 9.1%.

3.13.7 ***Type of Health facilities visited for Third Action*** : The use of primary level facilities for third action was less but unexpectedly very high (70.6%) among rural CS (64.7% to PMP and 5.9% to PHC) and 47.6% among

Table 29A

Distribution of CS by type of health facility contacted for each action (Raichur district)

Health facility	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
PMP	75	*92.6*	39	*81.3*	11	*64.7*	61	*69.3*	29	*65.9*	10	*47.6*
PHC	1	*1.2*	1	*2.1*	1	*5.9*	1	*1.1*	0	*0.0*	0	*0.0*
GH	3	*3.7*	4	*8.3*	1	*5.9*	19	*21.6*	9	*20.5*	6	*28.6*
NGH	0	*0.0*	3	*6.3*	2	*11.8*	4	*4.5*	2	*4.5*	3	*14.3*
DTC	0	*0.0*	1	*2.1*	1	*5.9*	0	*0.0*	1	*2.3*	0	*0.0*
Sanatorium	2	*0.0*	0	*0.0*	1	*5.9*	2	*2.3*	3	*6.8*	2	*9.5*
Others	2	*2.5*	0	*0.0*	0	*0.0*	1	*1.1*	0	*0.0*	0	*0.0*
Total	**81**		**48**		**17**		**88**		**44**		**21**	

Table 30A

Distribution of CS by number of visits to each health facility contacted for each action (Raichur district)

No. of visits	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	4	*5.0*	7	*14.6*	7	*41.2*	5	*5.7*	9	*20.5*	3	*14.3*
2	10	*12.5*	9	*18.8*	2	*11.8*	12	*13.6*	14	*31.8*	5	*23.8*
3	4	*5.0*	1	*2.1*	0	*0.0*	9	*10.2*	2	*4.5*	1	*4.8*
4	12	*15.0*	7	*14.6*	3	*17.6*	13	*14.8*	5	*11.4*	3	*14.3*
5 – 7	21	*26.2*	14	*29.2*	2	*11.8*	18	*20.5*	6	*13.6*	3	*14.3*
8+	29	*36.3*	10	*20.8*	3	*17.6*	31	*35.2*	8	*18.2*	6	*28.6*
Total	**80**		**48**		**17**		**88**		**44**		**21**	
NS	1		0		0		0		0		0	
Mean no. of visits	*5.4*		*4.4*		*3.4*		*5.2*		*3.6*		*4.4*	

urban CS. Use of secondary level general health facilities was 17.7% compared to 14.6% for second action in rural areas. It increased from 25.0% to 42.9% in urban areas. The use of specialised facilities by rural CS was higher for third action compared to the second action (2.1% and 11.8%). There was no such increase for urban CS. **The continued high use of primary level facilities for second and third actions and the negligible proportion of CS visiting specialised facilities for second and third action shows that the former hardly refers CS to the latter for more appropriate diagnosis and treatment**.

3.13.8 Number of visits to each Health Facility : For each action, multiple visits were often made. Table 30A gives the distribution of CS by number of visits to a health facility for each action. **Among the rural CS, the largest proportion (36.3%) made eight or more visits for the first action** followed by 26.2% making 5-7 visits, 15.0% four visits and 12.5% two visits. The pattern was the same among urban CS with 35.2% making eight or more visits followed by 20.5% making 5-7 visits, 14.8% four visits and 13.6% two visits. The **average number of visits for first action was 5.4 (rural) and 5.2 (urban). Fewer visits were made for the second action** - average of 4.4 (rural) and 3.6 (urban). In rural areas, 29.2% made 5-7 visits for the second action followed by 20.8% making 8+ visits and 18.8% two visits. Among urban CS, 31.8% made two visits for second action followed by 20.5% making one visit and 18.2% 8+ visits. **Average number of visits for the third action was 3.4 among rural CS and 4.4 among urban CS**. Among rural CS, 41.2% made only one visit followed by 17.6% each making four and 8+ visits. Among urban CS, 28.6% made 8+ visits followed by 23.8% with two visits and 14.3% each with one, four and 5-7 visits. Among rural CS, the percentage making only one visit increased with increase in the number of actions (from 5.0 to 14.6 and to 41.2) and that making 8+ visits decreased (from 36.3 to 20.8 and to 17.6). No such trend was observed for urban CS. Altogether, 1,197 visits were made by 135 rural CS who had taken action giving an average of 8.9

total visits per CS. Corresponding figures for urban CS were 588 visits by 67 CS giving an average of 8.8 total visits per CS.

3.13.9 ***Distance travelled for First Action :*** Table 31A shows the distribution of CS by distance travelled for taking each action. Since most of the villages were large and health facilities were present 58.0% of rural CS travelled less than 1 km for the first action. While 24.7% travelled only 1-5 km, 12.3% travelled 6-10 km. With health facilities within easier reach, only 34.1% of the urban CS travelled less than 1 km and 62.5% travelled 1-5 km. **The average distance travelled for taking first action was 3.5 km for rural CS and 4.1 km for urban CS**.

3.13.10 ***Distance travelled for second action :*** For the second action, 33.3% of the rural CS travelled less than 1 km followed by 16.7% each travelling 1-5 km and 21-40 km. Next in frequency was 10.4% travelling 6-10 km. Thus, while about 60% of rural CS travelled 0-10 km, as many as 40% travelled 16 km or more for taking second action. In sharp contrast, among urban CS, 84.1% travelled 1-10 km and only 15.9% travelled 16 km or more for taking second action. Half of the urban CS had travelled 1-5 km. **The average distance travelled for taking second action was 16.9 km for rural CS and 11.6 km for urban CS**.

3.13.11 ***Distance travelled for Third Action :*** Among rural CS, 58.8% travelled 0-10 km for taking third action, 23.6% travelled 16-70 km and 17.6% more than 70 km. The corresponding figures for urban CS were 66.7%, 19.1% and 14.3% respectively. **The average distance travelled for taking third action was the same; for urban CS (22.7 km) and for rural CS (23.6 km).** As many as 66.7% of the urban CS travelled only 0-5 km for taking even the third action compared to 47% for rural CS. Considering all actions together, travelling 0 to 5 km was most common among both rural and urban CS. **Average distance travelled for all actions together was 10.2 km for rural CS and 8.8 km for ubran CS**.

Table 31A

Distribution of CS by distance travelled for each action (Raichur district)

Distance (Km)	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<1	47	*58.0*	16	*33.3*	5	*29.4*	30	*34.1*	15	*34.1*	5	*23.8*
1 – 5	20	*24.7*	8	*16.7*	3	*17.6*	55	*62.5*	22	*50.0*	9	*42.9*
6 – 10	10	*12.3*	5	*10.4*	2	*11.8*	0	*0.0*	0	*0.0*	0	*0.0*
11 – 15	0	*0.0*	1	*2.1*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
16 – 20	0	*0.0*	4	*8.3*	2	*11.8*	0	*0.0*	0	*0.0*	0	*0.0*
21 – 40	3	*3.7*	8	*16.7*	1	*5.9*	0	*0.0*	0	*0.0*	1	*4.8*
41 – 70	1	*1.2*	3	*6.2*	1	*5.9*	2	*2.3*	5	*11.4*	3	*14.3*
71+	0	*0.0*	3	*6.2*	3	*17.6*	1	*1.1*	2	*4.5*	3	*14.3*
Total	81		48		17		88		44		21	
Mean distance	***3.5***		***16.9***		***23.6***		***4.1***		***11.6***		***22.7***	

3.13.12 *Mode of Transport*. **Among rural CS, 25.0% went by bus to take their first action and 70.0% walked**. The corresponding figures for **urban CS were 11.4% and 73.9% respectively**. While use of other modes of transport was negligible among rural CS, 12.5% of urban CS used unscheduled transport like van and auto. **Walking to the health facility was much less for the second action** for both rural and urban CS, the percentage coming down from 70.0 to 37.5 for rural CS and from 73.9 to 59.1 for urban CS. This led to an increase in the use of bus from 25.0% to 54.2% by rural CS and from 11.4% to 22.7% by urban CS. The proportion using unscheduled transport was almost the same (17.5%) for both actions by urban CS. For the third action, 47.1% of rural CS used bus and 35.3% walked, which was similar to that for second action. Among urban CS, 42.9% went by bus, 47.6% by foot and 9.5% by unscheduled transport. While walking was most common for visiting PMP among all actions by rural CS (62.5%), 32.0% had walked. Number of contacts made with other HFs was too small for any further analysis. Out of all actions by urban CS, 74.5% walked to PMP. The next common mode of travel was use of van or auto (12.3%) and bus (10.4%). Only for 2.8% of all actions by urban CS and 0.8% by rural CS own bicycle was used.

3.14 Single and Multiple Actions to Health Facilities

3.14.1 ***Frequency of Single and Multiple Actions :*** The distribution of rural and urban CS according to single and multiple actions to general health facilities (GHFs) and special health facilities (SHFs) is shown in Table 32A. Among the rural CS, 39.5% made single contact with a GHF - 38.3% with PMP a negligible 1.2% with GH and nil to PHC and SHF. Single actions were more among urban CS (48.9%) - 35.2% to PMP, 9.1% to GH, 3.4% to NGH, a negligible 1.1% to sanatorium and nil to DTC. Two or more actions to the same GHF (only PMP) were made by 40.7% of rural CS and 15.9% of urban CS. Multiple actions to combinations of GHFs only were taken by 13.6% of rural CS and 27.3% of urban CS. Multiple actions to combinations of GHF and SHF were taken by 3.7% of

Table 32A

Distribution of rural and urban CS by single and multiple contacts with health facilities (Raichur district)

Contacts with health facilities	Rural		Urban	
	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)
1. Single contacts with GHF or SHFs				
a) PMP	31	*38.3*	31	*35.2*
b) PHC	0	*0.0*	0	*0.0*
c) GH	1	*1.2*	8	*9.1*
d) NGH	0	*0.0*	3	*3.4*
e) Sanatorium	0	*0.0*	1	*1.1*
f) DTC	0	*0.0*	0	*0.0*
Sub - total	**32**	***39.5***	**43**	***48.9***
2. Two or more contacts with same GHFs				
a) PMP	33	*40.7*	14	*15.9*
b) PHC	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*
Sub – total	**33**	***40.7***	**14**	***15.9***
3. Multiple contacts with combinations of GHFs/SHFs				
a) GHFs only	11	*13.6*	24	*27.3*
b) GHFs and Sanatorium	1	*1.3*	5	*5.7*
c) GHFs and DTC	2	*2.5*	2	*2.3*
d) GHFs, sanatorium and DTC	0	*0.0*	0	*0.0*
Sub – total	**14**	***17.3***	**31**	***35.2***
4. **Other combinations**	2	*2.5*	0	*0.0*
Total	**81**		**88**	
A. Contacting only GHFs	78	*96.3*	80	*90.9*
B. Contacting SHFs sanatorium or DTC	3	*3.7*	8	*9.1*

rural CS and 8.0% of urban CS. Combinations with DTC were either negligible or nil. **Among rural CS, 96.3% had contacted only GHFs compared to 90.9% by urban CS**. The influence of some factors on making single or multiple actions are studied in the following paragraphs.

3.14.2 ***Influence of Age :*** Table 33A studies the influence of age. Among rural CS, single contacts were more common in age groups 35-54 (41.7%) and 55+ (42.2%) and least in age group 15-34 (25.0%). The position was reversed for two or more contacts with GHF - 29.2% in age group 35-54, 40.0% in age group 55+ and 66.7% in age group 15-34. **Single actions among urban CS increased steadily with increase in age for single contacts with GHFs** from 41.2% to 45.9% and to 55.9%. Two or more contacts with same GHF by urban CS was highest (21.6%) in age group 35-54 followed by 17.6% in age group 15-34 and 8.8% in age group 55+. Multiple contacts with combinations of GHFs and SHFs among rural CS was highest in 35-54 (29.2%) followed by age group 55+ (13.3%) and 15-34 age group (8.3%). On the contrary this proportion was highest in age group 15-34 (41.2%) among urban CS. It was 32.4% and 35.3% in the other two age groups.

3.14.3 ***Influence of Sex :*** Among urban CS, single contacts with GHFs were made by 45.7% females and 50.9% males (Table 34A). The situation appears to be the opposite among rural CS - 42.9% among females and 37.0% among males. Two or more contacts with GHFs were made by 31.4% females and 47.8% males among rural CS but this percentages among females and males among urban CS did not differ so much (14.3% and 17.0%). Multiple contacts with combinations of GHFs only were more common among females compared to males in rural and urban areas.

Table 33A

Influence of age on single and multiple contacts with health facilities by rural and urban CS (Raichur district)

Contacts to health facilities	Rural – age group						Urban – age group					
	15 – 34		35 – 54		55+		15 – 34		35 – 54		55+	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Single contact with GHF or SHF's												
a) PMP	3	*25.0*	9	*37.5*	19	*42.0*	7	*41.2*	13	*35.1*	11	*32.*
b) PHC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.*
c) GH	0	*0.0*	1	*4.2*	0	*0.0*	0	*0.0*	1	*2.7*	7	*20.*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	2	*5.4*	1	*2.*
e) Sanatorium	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	1	*2.7*	0	*0.*
f) DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.*
Sub – total	**3**	***25.0***	**10**	***41.7***	**19**	***42.2***	**7**	***41.2***	**17**	***45.9***	**19**	***55.***
2. Two or more contacts with same GHFs												
a) PMP	8	*66.7*	7	*29.2*	18	*40.0*	3	*17.6*	8	*21.6*	3	*8.*
b) PHC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.*
Sub - total	**8**	***66.7***	**7**	***29.2***	**18**	***40.0***	**3**	***17.6***	**8**	***21.6***	**3**	***8.***
3. Multiple contacts with GHFs /SHFs												
a) GHFs only	1	*8.3*	5	*20.8*	5	*11.1*	6	*35.3*	8	*21.6*	10	*29.*
b) GHFs and Sanatorium	0	*0.0*	1	*4.2*	0	*0.0*	1	*5.9*	2	*5.4*	2	*5.*
c) GHFs and DTC	0	*0.0*	1	*4.2*	1	*2.2*	0	*0.0*	2	*5.4*	0	*0.*
d) GHFs, sanatorium and DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.*
Sub – total	**1**	***8.3***	**7**	***29.2***	**6**	***13.3***	**7**	***41.2***	**10**	***32.4***	**12**	***35.***
4. Other combinations	0	*0.0*	0	*0.0*	2	*4.4*	0	*0.0*	0	*0.0*	0	*0.*
Total	**12**		**24**		**45**		**17**		**37**		**34**	
A. Contacting GHFs only	12	*100.0*	22	*91.7*	44	*97.8*	16	*94.1*	32	*86.5*	32	*94.*
B. Contacting SHFs (DTC or sanatorium)	0	*0.0*	2	*8.3*	1	*2.2*	1	*5.9*	5	*13.5*	2	*5.*

Table 34A

Influence of sex on single and multiple contacts with health facilities by rural and urban CS (Raichur district)

Contacts with health facilities	Rural				Urban			
	Females		Males		Females		Males	
	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. **Single contact with GHF or SHF's**								
a) PMP	15	*42.9*	16	*34.8*	13	*37.1*	18	*34.0*
b) PHC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	1	*2.2*	0	*0.0*	8	*15.1*
d) NGH	0	*0.0*	0	*0.0*	3	*8.6*	0	*0.0*
e) Sanatorium	0	*0.0*	0	*0.0*	0	*0.0*	1	*1.9*
f) DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**15**	***42.9***	**17**	***37.0***	**16**	***45.7***	**27**	***50.9***
2. **Two or more contacts with same GHFs**								
a) PMP	11	*31.4*	22	*47.8*	5	*14.3*	9	*17.0*
b) PHC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**11**	***31.4***	**22**	***47.8***	**5**	***14.3***	**9**	***17.0***
3. **Multiple contacts with GHFs/SHFs**								
a) GHFs only	8	22.9	3	6.5	14	40.0	10	*18.9*
b) GHFs and Sanatorium	0	*0.0*	1	2.2	0	*0.0*	5	9.4
c) GHFs and DTC	0	*0.0*	2	4.3	0	*0.0*	2	3.8
d) GHFs, sanatorium and DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	0.0
Sub – total	**8**	**22.9**	**6**	***13.0***	**14**	***40.0***	**17**	**32.1**
4. **Other combinations**	1	2.9	1	2.2	0	0.0	0	0.0
Total	**35**		**46**		**35**		**53**	
A. Contacting GHFs only	35	*100.0*	43	93.5	35	*100.0*	45	*84.9*
B. Contacting SHFs (DTC or sanatorium)	0	*0.0*	3	6.5	0	*0.0*	8	15.1

3.14.4 ***Influence of Type of Family :*** Table 35A shows that **single contacts with GHFs among rural CS were more frequent for CS of nuclear families** (45.5%) compared to CS of joint families (38.9%). The situation was just opposite **among urban CS - single actions were less frequent for CS of nuclear families (41.0%) compared to CS of joint families** (54.3%). Two or more contacts with GHF also showed a similar opposite picture - the frequency for rural CS of nuclear families being less (36.4%) than for CS of joint families (42.6%) and frequency for urban CS of nuclear families being more (20.5%) than for CS joint families (13.0%).

3.14.5 ***Influence of Family Size :*** The number of CS in families with 1-3 and 10+ persons were quite small in both rural and urban areas (ranging from 7 to 13 only). Hence only two combined groups of family size 1-6 and 7+ are presented in Table 36A. Single actions among urban CS were more common in the smaller families (51.9%) than in bigger families (44.1%). Among rural CS, there was no such difference. The percentages of rural and urban CS making two or more contacts with GHF did not differ much between smaller and bigger families. Multiple contacts with combinations of GHFs only among rural CS were less common in smaller families (10.0%) than in bigger families (17.1%), but the difference was in the opposite direction among urban CS. Such actions among urban CS were more common in smaller families (29.6%) than In bigger families (23.5%).

3.14.6 ***Influence of Religion and Caste :*** Table 37A studies the influence of religion and caste. Religion and caste groups other than SC/ST and BCs have not been included in the Table because of small numbers of CS. Percentage making single contacts with GHFs was higher among SC/ST compared to BCs among rural and urban CS, but the differences were small. Two or more contacts with GHF by rural CS were more frequent among SC/ST (42.9%) than among BCs (36.4%) but equal among urban SC/ST and urban BCs. Multiple contacts with combinations of GHFs and SHFs showed smaller frequencies among SC/ST compared to BCs for

Table 35A

Influence of type of family on single and multiple contacts with health facilities by rural and urban CS (Raichur district)

Contacts with health facilities	Rural – type of family				Urban – type of family			
	Nuclear		Joint		Nuclear		Joint	
	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. **Single contact with GHF or SHF's**								
a) PMP	10	*45.5*	20	*37.0*	13	*33.3*	17	*37.0*
b) PHC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	1	*1.9*	1	*2.6*	6	*13.0*
d) NGH	0	*0.0*	0	*0.0*	2	*5.1*	1	*2.2*
e) Sanatorium	0	*0.0*	0	*0.0*	0	*0.0*	1	*2.2*
f) DTC	0	*0.0*	0	*0.10*	0	*0.0*	0	*0.0*
Sub – total	**10**	***45.5***	**21**	***38.9***	**16**	***41.0***	**25**	***54.3***
2. **Two or more contacts with same GHFs**								
a) PMP	8	*36.4*	23	*42.6*	8	*20.5*	6	*13.0*
b) PHC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**8**	***36.4***	**23**	***42.6***	**8**	***20.5***	**6**	***13.0***
3. **Multiple contacts with GHFs /SHFs**								
a) GHFs only	2	*9.1*	8	*14.8*	13	*33.3*	11	*23.9*
b) GHFs and Sanatorium	1	*4.5*	0	*0.0*	2	*5.1*	3	*6.5*
c) GHFs and DTC	1	*4.5*	0	*0.0*	0	*0.0*	1	*2.2*
d) GHFs, sanatorium and DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub - total	**4**	***18.2***	**8**	***14.8***	**15**	***38.5***	**15**	***32.6***
4. **Other combinations**	0	*0.0*	2	3.7	0	*0.0*	0	*0.0*
Total	**22**		**54**		**39**		**46**	
A. Contacting GHFs only	20	*90.9*	54	*100.0*	37	*94.9*	41	*89.1*
B. Contacting SHFs (DTC or sanatorium)	2	*9.1*	0	*0.0*	2	*5.1*	5	*10.9*

Table 36A

Influence of family size on single and multiple contacts with health facilities by rural and urban CS (Raichur district)

Contacts with health facilities	Rural – family size				Urban – family size			
	1 – 6		7+		1 – 6		7+	
	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. **Single contact with GHF or SHF's**								
a) PMP	16	*40*	15	*36.6*	20	*37.0*	11	*32.4*
b) PHC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	1	2.4	6	*11.1*	2	5.9
d) NGH	0	*0.0*	0	*0.0*	2	*3.7*	1	2.9
e) Sanatorium	0	*0.0*	0	*0.0*	0	*0.0*	1	2.9
f) DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**16**	***40.0***	**16**	***39.0***	**28**	**51.9**	**15**	***44.1***
2. **Two or more contact with same GHFs**								
a) PMP	16	*40.0*	17	*41.5*	8	*14.8*	6	*17.6*
b) PHC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
c) GH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**16**	***40.0***	**17**	***41.5***	**8**	***14.8***	**6**	***17.6***
3. **Multiple contacts with GHFs / SHFs**								
a) GHFs only	4	*10.0*	7	*17.1*	16	29.6	8	23.5
b) GHFs and Sanatorium	1	2.5	0	*0.0*	1	*1.9*	4	*11.8*
c) GHFs and DTC	2	5.0	0	*0.0*	1	*1.9*	1	2.9
d) GHFs, sanatorium and DTC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Sub – total	**7**	***17.5***	**7**	***17.1***	**18**	**33.3**	**13**	**38.2**
4. **Other combinations**	1	2.5	1	2.4	0	*0.0*	0	*0.0*
Total	**40**		**41**		**54**		**34**	
A. Contacting GHFs only	37	92.5	41	*100.0*	52	96.3	28	82.4
B. Contacting SHFs (DTC or sanatorium)	3	7.5	0		2	3.7	6	17.6

Table 37A

Influence of major castes on single and multiple contacts with health facilities by rural and urban CS (Raichur district)

Contacts with health facilities	Rural – major castes				Urban – major castes			
	SC/ST		BCs		SC/ST		BCs	
	No.	%	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. **Single contact with GHF or SHF's**								
a) PMP	15	42.9	8	36.4	12	31.6	4	21.1
b) PHC	0	0.0	0	0.0	0	0.0	0	0.0
c) GH	0	0.0	0	0.0	2	5.3	2	10.5
d) NGH	0	0.0	0	0.0	3	7.9	0	0.0
e) Sanatorium	0	0.0	0	0.0	1	2.6	0	0.0
f) DTC	0	0.0	0	0.0	0	0.0	0	0.0
Sub - total	**15**	**42.9**	**8**	**36.4**	**18**	**47.4**	**6**	**31.6**
2. **Two or more contacts with same GHFs**								
a) PMP	15	42.9	8	36.4	8	21.1	4	21.1
b) PHC	0	0.0	0	0.0	0	0.0	0	0.0
c) GH	0	0.0	0	0.0	0	0.0	0	0.0
d) NGH	0	0.0	0	0.0	0	0.0	0	0.0
Sub – total	**15**	**42.9**	**8**	**36.4**	**8**	**21.1**	**4**	**21.1**
3. **Multiple contacts with GHFs/SHFs**								
a) GHFs only	4	11.4	4	18.2	7	18.4	8	42.1
b) GHFs and Sanatorium	0	0.0	1	4.5	4	10.5	0	0.0
c) GHFs and DTC	1	2.9	1	4.5	1	2.6	1	5.3
d) GHFs, sanatorium and DTC	0	0.0	0	0.0	0	0.0	0	0.0
Sub - total	**5**	**14.3**	**6**	**27.3**	**12**	**31.6**	**9**	**47.4**
4. **Other combinations**	0	0.0	0	0.0	0	0.0	0	0.0
Total	**35**		**22**		**38**		**19**	
A. Contacting GHFs only	34	97.1	20	90.9	32	84.2	18	94.7
B. Contacting SHFs (DTC or sanatorium)	1	2.9	2	9.1	6	15.8	1	5.3

both rural and urban CS (14.3% and 27.3% respectively among rural CS and 31.6% and 47.4% respectively among urban CS).

3.14.7 ***Influence of Occupation :*** Among rural CS, the percentage making single contacts with GHFs or SHFs was equal among the employed (42.9%) and unemployed and students (44.0%) which was much higher than that for housewives (21.4%) (Table 38A). But this proportion did not differ much among urban CS. The percentage of rural CS making two or more contacts with GHF was highest among unemployed and students (44.0%) and lowest among the employed (38.1%) with housewives in between (42.9%). This proportion among urban CS was lowest for unemployed and students (5.9%) and highest for the employed and housewives (about 18%). The highest frequency for multiple visits to combinations of GHFs only by rural CS was among the housewives (28.6%) and lowest among unemployed and students (12.0%) with employed in between (16.7%).

3.14.8 ***Influence of Highest Education Level in HH :*** Table 39A shows that among rural CS, single contacts with PMP did not differ between the three education groups but increased steadily with increase in education for urban CS from 30.0% to 40.0%. The situation was similar for two or more contacts with the same GHF. Among rural CS, multiple contacts with combinations of GHFs was highest (18.8%) for below SSC and least for illiterates (9.1%) with SSC+ in between (11.1%). The situation was opposite among urban CS with the highest percentage (35.0) for illiterates and lowest (23.3) for below SSC with SSC+ (28.0) in between.

3.15 Diagnostic Examinations

3.15.1 ***Sputum Examination during each Action :*** **Sputum examination was ordered for only 9.9% of rural CS and 19.3% of urban CS during first action** (Col.4 of Table 40A). For 12.5% of rural CS for whom it was ordered, it was done at the same facility all on another day, requiring an

Table 38A :

Influence of occupation on single and multiple contacts to health facilities by rural and urban CS (Raichur District)

Contacts with health facilities	Rural						Urban					
	Unemployed & Students		Housewives		Employed		Unemployed & Students		Housewives		Employed	
	No	%	No	%	No	%	No	%	No	%	No	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Single contacts with GHFs and SHFs												
(a) PMP	11	*44.0*	3	*21.4*	17	*40.5*	5	*29.4*	9	*40.9*	17	*34.7*
(b) PHC	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
(c) GH	0	*0.0*	0	*0.0*	1	*2.4*	3	*17.6*	0	*0.0*	5	*10.2*
(d) NGH	0	*0.0*	0	*0.0*	0	*0.0*	1	*5.9*	1	*4.5*	1	*2.0*
(e) Sanatorium	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	1	*2.0*
(f) DTC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sub total	**11**	***44.0***	**3**	***21.4***	**18**	***42.9***	**9**	***52.9***	**10**	***45.5***	**24**	***49.0***
2. Two or more contacts with GHFs												
(a) PMP	11	44.0	6	42.9	16	38.1	1	5.9	4	18.2	9	18.4
(b) PHC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
(c) GH	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
(d) NGH	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sub total	**11**	***44.0***	**6**	***42.9***	**16**	***38.1***	**1**	**5.9**	**4**	***18.2***	**9**	***18.4***
3. Multiple contacts with combinations of :												
(a) GHFs only	3	12.0	4	28.6	4	9.5	6	35.3	8	36.4	10	20.4
(b) GHFs & Sanatorium	0	0.0	0	0.0	1	2.4	1	5.9	0	0.0	4	8.2
(c) GHFs & DTC	0	0.0	0	0.0	2	4.8	0	0.0	0	0.0	2	4.1
(d) GHFs, Sanatorium & DTC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sub total	**3**	**12.0**	**4**	**28.6**	**7**	**16.7**	**7**	**41.2**	**8**	**36.4**	**16**	**32.7**
4. Other Combinations	0	0.0	1	7.1	1	2.4	0	0.0	0	0.0	0	0.0
Total	**25**		**14**		**42**		**17**		**22**		**49**	
A. Contacting GHF's only	25	100.0	14	100.0	39	92.9	16	94.1	22	100.0	42	85.7
B. Contacting DTC & Sanatorium	0	0.0	0	0.0	3	7.1	1	5.9	0	0.0	7	14.3

Table 39 A

nfulence of highest education level in the family on single and multiple contacts with health facilities by rural and urban CS.(Raichur District)

contacts with health facilities	Rural Highest Education Level in HH						Urban-Highest Education Level in HH					
	Illiterate		Below SSC		SSC+		Illiterate		Below SSC		SSC+	
	No	%	No	%	No	%	No	%	No	%	No	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Single contacts with GHFs or SHFs												
(a) PMP	8	*36.4*	13	*40.6*	10	*37.0*	6	*30.0*	15	*34.9*	10	*40.0*
(b) PHC	0		0		0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
(c) GH	0		0		1	*3.7*	3	*15.0*	3	*7.0*	2	*8.0*
(d) NGH	0		0		0		1	*5.0*	1	*2.3*	1	*4.0*
(e) Sanatorium	0		0		0		0	*0.0*	1	*2.3*	0	*0.0*
(f) DTC	0		0		0		0	*0.0*	0	*0.0*	0	*0.0*
Sub total	**8**	***36.4***	**13**	***40.6***	**11**	***40.7***	**10**	***50.0***	**20**	***46.5***	**13**	***52.0***
2. Two or more contacts with GHF												
(a) PMP	9	*40.9*	12	*37.5*	12	*44.4*	2	*10.0*	7	*16.3*	5	*20.0*
(b) PHC	0		0		0		0		0		0	
(c) GH	0		0		0		0		0		0	
(d) NGH	0		0		0		0		0		0	
Sub total	**9**	***40.9***	**12**	***37.5***	**12**	***44.4***	**2**	***10.0***	**7**	***16.3***	**5**	***20.0***
3. Multiple contacts with combinations of :												
(a) GHF only	2	*9.1*	6	*18.8*	3	*11.1*	7	*35.0*	10	*23.3*	7	*28.0*
(b) GHF & Sanatorium	0	*0.0*	1	*3.1*	0	*0.0*	0	*0.0*	5	*11.6*	0	*0.0*
(c) GHFs & DTC	2	*9.1*	0	*0.0*	0	*0.0*	1	*5.0*	1	*2.3*	0	*0.0*
(d) GHFs, & DTC Sanatorium												
4. Other Combinations	1	*4.5*	0	*0.0*	1	*3.7*	0	*0.0*	0	*0.0*	0	*0.0*
Sub total	**4**	*18.2*	**7**	*21.9*	**3**	*11.1*	**8**	*40.0*	**16**	*37.2*	**7**	*28.0*
Total	**22**		**32**		**27**		**20**		**43**		**25**	
A. Contacting GHF's only	20	*90.9*	31	*96.9*	27	*100.0*	19	*95.0*	36	*83.7*	25	*100.0*
B. Contacting DTC/ Sanatorium	2	*9.1*	1	*3.1*	0	*0.0*	1	*5.0*	7	*16.3*	0	*0.0*

Table 40A

: Details of Sputum examination by rural and urban CS (Raichur District)

Sputum examination during/by		Ordered		Examined		Results told		Positive		
	No of CS	No	% of Col 2	No	% of Col 3	No	% of Col 5	No	% of Col 5	% of Col 7
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Rural.										
During :										
Action 1.	81	8	*9.9*	8	*100.0*	6	NC	1	NC	NC
Action 2.	48	12	*25.0*	12	*100.0*	9	*75.0*	4	*33.3*	*44.4*
Action 3.	17	3	*17.6*	3	*100.0*	3	NC	2	NC	NC
By:										
PMP	129	15	*11.6*	15	*100.0*	10	*66.7*	3	*20.0*	*30.0*
PHC	5	0		0		0		0		
GH	8	4	*50.0*	4	*100.0*	4	NC	1	NC	NC
NGH	5	2		2		2	NC	2	NC	NC
DTC	2	2		2		2	NC	1	NC	NC
Sanatorium	1	1		1		1	NC	1	NC	NC
Urban										
During :										
Action 1.	88	17	*19.3*	17	*100.0*	11	*64.7*	7	*41.2*	*63.6*
Action 2.	44	8	*18.2*	8	*100.0*	6	NC	4	NC	NC
Action 3.	21	9	*42.9*	9	*100.0*	7	NC	5	NC	NC
By:										
PMP	106	13	*12.3*	13	*100.0*	9	*69.2*	6	*46.1*	*66.7*
PHC	2	0		0		0		0		
GH	35	14	*40.0*	14	*100.0*	8	*57.1*	4	*28.6*	*50.0*
NGH	10	2		2		2	NC	1	NC	NC
DTC	2	1		1		1	NC	1	NC	NC
Sanatorium	7	7		7		5	NC	5	NC	NC

additional visit (not given in the Table). The remaining 87.5% had sputum examination at another facility on another day after an additional visit. For 64.7% of urban CS for whom it was ordered it was done at the same facility - 17.6% on the same day and 47.1% at the same facility on another day - and for 35.3% at another facility on another day. Thus, 82.4% had to make additional visit. Ordering of sputum examination for rural CS showed only some improvement for second action but deteriorated for third action, the figures being 25.0% and 17.6% respectively. For urban CS, sputum was ordered for 18.2% for second action and for 42.9% for third action showing some improvement for third action but still not satisfactory. Out of those for whom sputum examination has been ordered for more than two-third it was done in the same facility for both second and third actions in both areas (not given in the Table). A small proportion of them (varying from nil to 25%) had to make another visit to get it done. **The fact that about 90% of the sputum examinations ordered were done in the same facility shows that most of the health facilities without facilities for sputum examination did not order sputum examination**.

3.15.2 ***Sputum Examination at different Health Facilities :*** Out of the total of 150 actions taken by rural CS, 129 (86.0%) were for consulting PMP. **Only in 11.6% of these, the PMP asked the CS to get their sputum examined** (Col.4 of Table 40A). The situation was better but still much short of expectations during consultations with GH, 50.0% ordering sputum examination. Further, the number of such actions was very small (8 only). During three actions taken to consult DTC/sanatorium, sputum examination was ordered for all. The situation was slightly worse for urban CS with sputum being ordered by 12.3% PMP and 40.0% GH. Less than 90% of CS were ordered sputum examination by DTC / sanatorium. **Even these specialised institutions did not order sputum examination for all CS**.

3.15.3 ***Information about results of sputum examination at each action:*** Out of those who had sputum examination during the first action, six out of eight rural CS and 64.7% of urban CS were informed about result of sputum examination (Table 40A). Those who were told about the result during second action formed 75.0% among rural CS and six out of eight among urban CS. During third action, all the three rural CS and seven out of nine urban CS were told the result.

3.15.4 ***Information about result of sputum examination at health facilities:*** Among rural CS, out of the actions leading to sputum examination, results were told to CS for 66.7% by PMP and 4 out of 4 by GH (Col.8 of Table 40A). The corresponding figures for urban CS were : 69.2% by PMP, 57.1% by GH and 6 out of 8 by DTC/ sanatorium. **These show some laxity on the part of these health facilities in informing CS about results of sputum examination**.

3.15.5 ***Sputum Positivity:*** Out of those for whom results of sputum examination were told, the percentage positive was 44.4% for rural CS during action 2 and 63.6% for urban CS during action 1 (Col.11 of Table 40A). (Percentages have not been calculated for other actions because of small numbers of rural and urban CS examined but the figures indicate a high positivity rate). Percentage positive was 30.0 for rural CS consulting PMP, 66.7 for urban CS consulting PMP and 50.0 for urban CS consulting GH. (For most of the other consultations also, with small number of rural and urban CS examined, the positivity rate appears to be very high). **Even if it is assumed that all those who were not told of the result were negative, positivity rates were still high (Col.10 of Table 40A) and much more than 10% expected under NTP**. The relevant figures were: 33.3% for second action by rural CS and 41.2% for first action by urban CS. Positivity rate from actions to consult PMP was 20 for rural CS and 41.2 for urban CS. The rate from consultations with GH was 28.6 for urban CS. **Two possible reasons** for high positivity rate are (1) **health**

facilities order sputum examination only to confirm a clinical diagnosis of TB which they had arrived at (the very large proportion of CS for whom sputum examination has not been ordered supports this) or (2) the **quality of sputum examinations was very poor**, or both. In any case, the situation was very bad for NTP. **The very large proportions of CS for whom sputum has not been ordered and for whom the results have not been told indicate a lack of sincerity to NTP**.

3.15.6 ***X-ray Examination during each action***: **At the time of first action, only 11.1% of rural CS and 25.0% of urban CS were asked to have X-ray examination** (Col. 4 of Table 41A). Among those ordered, 11.1% were done at the same facility (all on another day) by rural CS and the remaining 88.9% at another facility on another day (not shown in the Table). The corresponding figures for urban CS were : 63.6% at the same facility (9.1% on same day and 54.5% on another day) and 36.4% at another facility on another day. Percentage of urban CS who were asked to have X-ray done increased from 25.0 for first action to 27.3 for second action and 47.6 for third action. There was no such trend for rural CS. Among rural and urban CS who were ordered X-ray during second and third actions, the vast majority (varying from 69.2% to 100%) had the X-ray done at the same facility, indicating that generally only those who have facility for X-ray examination ordered it. Most of them (58.3% to 80.2%) had to got it done on another day. The lowest and highest figures were observed for urban CS the former for second action and the latter for third action.

3.15.7 ***X-ray Examination at Health facilities :*** Out of 150 actions taken by rural CS, 129 (86.0%) were for consultation with PMP. X-ray examination was ordered for 12.4% of them by PMP (Col.4 of Table 41A). Out of 162 actions taken by urban CS, 106 (65.4%) were for consultations with PMP, 35 (21.6%) for consultation with GH and 10 (6.2%) for consultation with NGH. X-ray examination was ordered for 17.9% of them by PMP, 48.6% by GH and 30.0% by NGH.

3.15.8 ***Information about Results of X-ray Examination during each Action:*** Among the rural CS who had X-ray examination, the proportion who were told about the result was 76.9% at second action (Col.8 of Table 41A). The corresponding figures for urban CS increased steadily from 54.5% for first action to 75.0% for second action and to 80.0% for third action.

3.15.9 ***Information about Result of X-Examination at Health Facilities :*** Among rural CS, out of all actions leading to X-ray examination, results were told to 62.5% by PMP (Col.8 of Table 41A). The corresponding figures for urban CS were : 68.4% by PMP, and 41.2% by GH.

3.15.10 ***X-ray Positivity :*** Among rural CS, out of those for whom results were told, 40.0% were positive during action 2 (Col.11 of Table 41A). The corresponding figure for urban CS was 66.7% for action 1. The positivity rate during consultations with PMP was 40.0% for rural CS and 76.9% for urban CS. These positivity rates were high. If it is assumed that all those who were not told the results were negative, the positivity rates (Col.10 of Table 41A) varied from 30.8% to 60.0% for different actions by rural and urban CS and from 17.6% to 52.6% for examinations ordered by different health facilities.

3.15.11 ***Information about diagnosis at each action :*** **During the first action, 82.7% of rural CS were not told about what disease they were suffering from**. The situation was somewhat better among urban CS (75.0% not told). Though there was **some improvement for both rural and urban CS during second and third actions** (except for second action by urban CS) **the situation was still not desirable, particularly for rural CS**. The relevant figures (for diagnosis not told) were : 78.7% and 64.7% respectively for second and third actions by rural CS and 77.3% and 52.4% respectively for second and third actions by urban CS.

3.15.12 ***Information about diagnosis by Health Facilities :*** Answer to the question on whether diagnosis has been informed was available for 149 out of 292 actions taken by rural CS and for all the 162 actions taken by

Table 41A

Details of X-Ray examination by rural and urban CS (Raichur District)

X-Ray examination during/by	No of CS	Ordered		Examined		Results told		Positive		
		No	% of Col 2	No	% of Col 3	No	% of Col 5	No	% of Col 5	% of Col 7
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Rural.										
During :										
Action 1.	81	9	11.1	9	100.0	6	NC	2	NC	NC
Action 2.	48	13	27.1	13	100.0	10	76.9	4	30.8	40.0
Action 3.	17	4	23.5	4	100.0	4	NC	2	NC	NC
By:										
PMP	129	16	12.4	16	100.0	10	62.5	4	25.0	40.0
PHC	3	0	NC	0	0.0	0	NC	0		
GH	8	4	NC	4	100.0	4	NC	1	NC	NC
NGH	5	4	NC	4	100.0	4	NC	2	NC	NC
DTC	2	2	NC	2	100.0	2	NC	1	NC	NC
Sanatorium	1	1	NC	1	100.0	1	NC	1	NC	NC
Urban										
During :										
Action 1.	88	22	25.0	22	100.0	12	54.5	8	36.4	66.7
Action 2.	44	12	27.3	12	100.0	9	75.0	7	58.3	NC
Action 3.	21	10	47.6	10	100.0	8	80.0	6	60.0	NC
By:										
PMP	106	19	17.9	19	100.0	13	68.4	10	52.6	76.9
PHC	1	0	NC	0		0		0		
GH	35	17	48.6	17	100.0	7	41.2	3	17.6	NC
NGH	10	3	30.0	3	NC	3	NC	2	NC	NC
DTC	2	2	NC	2	NC	2	NC	2	NC	NC
Sanatorium	7	7	NC	7	NC	5	NC	5	NC	NC

urban CS. **For the vast majority of consultations with primary and secondary level facilities the diagnosis was not told to the CS**. The relevant figures were : 82.8% (rural) and 76.4% (urban) by PMP, 75.0% (rural) and 80.0% (urban) by GH and 20.0% (rural) and 60.0% (urban) by NGH.

3.15.13 ***Diagnosis of TB during each action :*** Percentage of CS who were told that they were suffering from TB steadily increased with each action by rural and urban CS, with the latter having consistantly higher percentage diagnosed as TB, indicating that the **percentage of TB cases out of chest symptomatics may be higher among urban CS compared to rural CS**. The relevant figures were: 3.7%, 8.5% and 17.6% respectively for first, second and third actions by rural CS and 13.6%, 15.9% and 38.1% respectively for first, second and third actions by urban CS. **These could also indicate fluctuating quality of diagnosis or weeding out of CS who are not suffering from TB for subsequent actions or both**.

3.15.14 ***Diagnosis of TB by Health facilities :*** Proportion of consultations at primary level leading to diagnosis of TB were : 4.7% by PMP among rural CS, 14.2% by PMP among urban CS. At the secondary level, the relevant figures were : 12.5% by GH among rural CS, 11.4% by GH among urban CS and 20.0% by NGH among urban CS.

3.16 Treatment

3.16.1 ***Type of Treatment :*** **For the vast majority of actions, CS received only out-patient treatment**. The relevant figures for those receiving out-patient treatment were : 100% for each action by rural CS and 97.7%, 93.2% and 90.5% respectively for first, second and third actions by urban CS. Among the small number of CS (varying from 2 to 3) who had in-patient treatment the period varied from one week to four months.

3.16.2 ***Check-up Examination :*** **None of the rural and urban CS had a check-up examination during or after the treatment** received at the time of any action, except for the second action by one urban CS who had an X-ray examination.

3.17 Satisfaction with Services

3.17.1 ***Satisfactory actions by CS:*** Services provided were generally satisfactory for more than half of the total actions taken. Proportion of satisfactory actions by rural CS was 55.8% for PMP and 75.0% for GH. NGH fared better with 80.0% being satisfactory (40% fully) but was not at all popular with a contribution of only 3.3% of the total actions taken probably because of being more costly and not attuned to the rural culture. Among actions taken by urban CS, the proportion satisfactory was less for services of GH (48.6%) compared to that by PMP (54.8%).

3.17.2 ***Extent of satisfaction :*** Among the satisfactory actions by rural CS, the proportion fully satisfied was nil out of 2 for DTC, nil out of 1 for sanatorium and 4 out of 8 for GH, which are government health facilities. This proportion was 2 out of 4 for NGH and 20.8% for PMP (both private health facilities). Among the satisfactory actions by urban CS, the proportion fully satisfied was nil out of 2 for DTC,. One out of 7 for sanatorium and 17.6% for GH. This proportion was 28.1% for PMP and nil out of 4 for NGH.

3.17.3 ***Reasons for satisfaction / non-satisfaction :*** When specifically asked for the reasons for satisfaction / non – satisfaction for each action, the replies showed a different picture now. **None of the actions taken by rural CS and less than 5% of actions urban CS were now stated to be satisfactory. The main reason for non-satisfaction was "not cured"** (symptom has not subsided) among actions taken by both rural and urban CS (47%). Out of the actions taken by rural CS, 35.9% were not considered satisfactory because of only partial cure even though they felt better now and 14.1% because they were not feeling alright even

though they were partially cured. These two perceptions of partial cure together formed 50.0%. The corresponding figures for action taken by urban CS were 37.9%, 8.6% and 46.5% respectively It is interesting that the same proportion (47%) of actions by rural and urban CS in Mysore district also were not satisfied because of not being cured and nearly the same for the other two reasons.

3.18 Reasons for Observed Behaviour

3.18.1 *Choosing Health Facility for First Action :* The **most common reason for choosing health facility for first action by rural CS was proximity to residence or convenience** (72.8%) followed by advice of friends, relatives and neighbours (17.3%) and expectations regarding diagnosis and treatment (9.9%), which together formed 100% (Table 42A). The situation was slightly different for urban CS. Frequency for proximity of residence or convenience was reduced to 54.0%. The next frequent reasons were expectation of free diagnosis and treatment (17.2%) advice of friends etc (14.9%) and expectation of correct diagnosis and treatment (13.8%), all four together accounted for 99.9%.

3.18.2 *Choosing Health Facility for Second Action :* **For second action, the weightage given to proximaty/convenience dropped steeply down** to 6.2% for rural CS. Only 10.4% of rural CS and 2.3% of urban CS took the second action because of being referred by a PMP or doctor of a PHC or hospital and shows that the **doctors contacted by them during their first action did not take any interest in referring the CS to a proper health facility even when the symptoms did not subside**. Thus, the reason for choice of facility **for the second action which was most frequent among rural CS was the expectation of correct diagnosis and better treatment because their first action did not help to overcome their suffering** (52.1%). Next came advice from lay persons such as friends, relatives etc. (25.0%). Among urban CS, the more common reasons were advice from friends etc. (36.4%) and expectation of

Table 42A

stribution of CS by reason for choosing the health facility contacted for each action (Raichur District)

Reason	Rural						Urban					
	Action 1		Action 2		Action 3		Action 1		Action 2		Action 3	
	No	%	No	%	No	%	No	%	No	%	No	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Referred by doctor												
(a) PMP	0	*0.0*	5	*10.4*	0	*0.0*	0	*0.0*	1	*2.3*	1	*4.8*
(b) PHC/Hospital	0	*0.0*	0	*0.0*	1	*5.9*	0	*0.0*	0	*0.0*	0	*0.0*
Sub total	**0**	***0.0***	**5**	***10.4***	**1**	***5.9***	**0**	***0.0***	**1**	***2.3***	**1**	***4.8***
2. Advised by lay persons												
(a) TB patient	0	*0.0*	1	*2.1*	0	*0.0*	0	*0.0*	0	*0.0*	3	*14.3*
(b) Friends, relatives, etc	14	*17.3*	12	*25.0*	6	*35.3*	13	*14.9*	16	*36.4*	11	*52.4*
(c) Social worker/ local leader	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	1	*2.3*	0	*0.0*
Sub total	**14**	***17.3***	**13**	***27.1***	**6**	***35.3***	**13**	***14.9***	**17**	***38.6***	**14**	***66.7***
3. Expectation												
(a) Free diagnosis & treatment	3	*3.7*	2	*4.2*	1	5.9	15	*17.2*	4	*9.1*	0	*0.0*
(b) Correct diagnosis & treatment	5	*6.2*	6	*12.5*	7	*41.2*	12	*13.8*	3	*6.8*	1	*4.8*
(c) Better treatment than from earlier action	0	*0.0*	19	*39.6*	1	5.9	0	0.0	13	*29.5*	4	*19.0*
Sub total	**8**	***9.9***	**27**	***56.2***	**9**	***52.9***	**27**	***31.0***	**20**	***45.5***	**5**	***23.8***
4. Proximity or convenience	59	*72.8*	3	*6.2*	1	*5.9*	47	*54.0*	6	*13.6*	1	*4.8*
5. Others	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Total	**81**		**48**		**17**		**87**		**44**		**21**	
N.S.							1					

correct/better diagnosis and treatment (36.3%). While 9.1% chose the facility because of expectation of free diagnosis and treatment, 2.3% did so because of advice from social worker/local leader.

3.18.3 ***Choosing Health Facility for Third Action:*** Though advice of doctors influenced the choice of facility for third action by more CS (nearly double of that of second action) among urban CS, it was still as low as 4.8% only. The frequency for this reason dropped to 5.9% for third action by rural CS (from 10.4% for second action). These show that the **doctors consulted by the CS during first and second actions, often repeatedly and with continuation of symptoms, did not take enough interest in referring them to a proper health facility like DTC or sanatorium**. While the expectation of correct/ better diagnosis and treatment was still the most common reason for choice of facility for third action (47.1%) among rural CS, this had less influence on urban CS (23.8% compared to 36.3% for second action). **Advice from lay persons (friends, relatives etc) was the most frequent reason among urban CS (52.4%) and the second common reason among rural CS (35.3%)**. Thus, **despite repeatedly contacting doctors, the choice of healthy facility for third action was predominantly the advice of lay persons**. It is also significant that among urban CS **expectation of correct/better diagnosis and treatment which had increased from 13.8% for first action to 36.3% for second action dropped down to 23.8%. This probably shows that they no longer looked for it out of frustration or disillusionment**.

3.18.4 ***Reason for not taking action :*** Among rural and urban CS, the most common reason for not taking any action was "will become alright" belief (44.4% rural and 37.5% urban) followed by "no money" (33.3% rural and 31.2% urban). Using traditional / home remedies, pooja etc was stated by 12.5% of urban CS (nil by rural CS). About one fifth of rural CS and one eighth of urban CS did not give any clear reason.

3.18.5 ***Reason for Multiple Contacts :*** To get relief from suffering / earlier action did not provide relief was the predominant reason for making multiple contacts - 97.9% among rural CS and 93.3% among urban CS. One urban CS (2.2%) and no rural CS stated that when they suspected TB they changed to specialised health facilities. It is significant that **only one rural CS (2.1%) and no urban CS mentioned that they changed because they were referred by a doctor**.

3.18.6 ***Suggestions to other CS :*** When asked about which health facilities they would suggest to other CS on the basis of their experience, the most common reply among rural CS was PMP (78.2%) followed by no advice (11.5%) and hospital (5.1%). Only one CS each (1.3%) advised visit to DTC and sanatorium. Among urban CS, the most frequent reply was PMP (57.0%) followed by hospital (19.8%), no advice (11.6%) and sanatorium (5.8%). Only two CS (2.3%) advised visit to DTC.

3.18.7 ***Remarks from CS who had taken multiple actions :*** Those CS who had contacted more than one facility were asked their opinion about which facility they had unnecessarily contacted. Among the rural CS, the most common reply was PMP (83.0%) followed by PHC and GH (4.3% each). Among urban CS, the more frequent reply was PMP (45.5%) followed by combination of PMP and PHC/GH (18.2%) and GH (9.1%). None of the contacts were considered to be unnecessary by 10.6% of rural CS and 11.4% of urban CS.

3.18.8 ***Suggestions for improvement :*** The CS were asked for suggestions to improve the services. Their answers were analysed in the context of the TB programme. Among urban CS, 60.2% had not visited a PHI or DTC. Out of the remaining CS, 85.7% did not give any suggestions for improvement and 14.3% wanted free treatment to be given in PHIs. Among rural CS, 85.0% had not visited a PHI or DTC. Out of the remaining CS, 66.7% did not suggest any improvement, 25.0% wanted free treatment to be given by PHIs and 8.3% wanted quality of services to

be improved. The question of improvement of DTC services did not arise because only two each of rural and urban CS had visited the DTC.

3.19 ***Self - suspected TB Cases***

3.19.1 ***Prevalence of self suspected TB :*** The CS were asked whether they suspected that they were suffering from TB. Out of the 165 CS for whom information was available, 19 stated "Yes" – 7 in rural areas and 12 in urban areas. The proportion who suspected was 8.8% of rural CS and 14.1% of urban CS. The prevalence rate of self-suspected TB cases in the population was 0.7 per 1,000 (rural), and 1.2 per 1,000 (urban) and 0.9 per 1,000 (overall). The proportion of female self-suspected TB cases was 50.0% overall – 57.1% (rural) and 33.3% (urban).

3.19.2 ***Prevalence rate for self – suspected TB by age and sex :*** Table 43A shows the number, prevalence rate and percentage of self-suspected TB cases in different age-sex groups. The prevalence rate (in the population of age 15 or more) was lower in rural areas (1.1 per 1,000) compared to urban areas (1.9 per 1,000) the overall rate being 1.3 per 1,000. This was also higher among males (1.5 per 1,000) compared to females (1.3 per 1,000). The difference between prevalence rates for males and females was less in rural areas. Age group 15-34 has smaller prevalence rate (0.6 per 1,000) compared to the other two age groups 35-54 and 55+ which were (1.4 and 4.2 per 1,000 respectively).

3.19.3 ***Age distribution of self-suspected TB Cases:*** The overall weighted proportions in different age groups showed a steady increase from 20.0% in age 15-34 to 32.5% in 35-54 and to 47.5% in age 55+. These proportions did not differ between males and females but not so between rural and urban areas. Proportions in different age groups increased with age from 14.3% in 15-34 to 28.6% in 35-54 and to 57.1% in 55+ in rural areas. The corresponding percentages were 33.3, 41.7 and 25.0 respectively in urban areas. The overall unweighted proportions, which

Table 43A

Number (No), prevalence rate per thousand (PR) and percentage (P) of self suspected TB cases in different age sex groups in rural and urban areas (Raichur District)

Area	Sex	Age group											
		15-34			35-54			55+			15+		
		No.	PR	P	No.	PR	P	No.	PR	P	No.	PR	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Rural	F	1	*0.6*	*25.0*	1	*1.1*	*25.0*	2	*4.1*	*50.0*	4	*1.3*	*100.0*
	M	0	*0.0*	*0.0*	*1*	*1.0*	*33.3*	2	*4.8*	*66.7*	3	*1.0*	*100.0*
	T	1	*0.3*	*14.3*	2	*1.0*	*28.6*	4	*4.4*	*57.1*	7	*1.1*	*100.0*
Urban	F	0	*0.0*	*0.0*	2	*2.1*	*50.0*	2	*4.8*	*50.0*	4	*1.3*	*100.0*
	M	4	*2.4*	*50.0*	3	*2.8*	*37.5*	1	*2.7*	*12.5*	8	*2.6*	*100.0*
	T	4	*1.2*	*33.3*	5	*2.5*	*41.7*	3	*3.8*	*25.0*	12	*1.9*	*100.0*
Rural + **Urban** (Weighted) PR and percentages)	F		*0.4*	*17.5*		*1.4*	*32.5*		*4.3*	*50.0*		*1.3*	*100.0*
	M		*0.7*	*15.0*		*1.5*	*34.6*		*4.2*	*50.4*		*1.5*	*100.0*
	T		*0.6*	*20.0*		*1.4*	*32.5*		*4.2*	*47.5*		*1.3*	*100.0*
Rural + **Urban** (unweighted percentages)	F			*25.0*			*25.0*			*50.0*			*100.0*
	M			*0.0*			*33.3*			*66.7*			*100.0*
	T			*14.3*			*28.6*			*57.1*			*100.0*

Note : Percentages in different groups are calculated on small numbers (3 to 12).
The prevalence rates are based on small numerators.

are based on larger numbers, show that 50% or more of the suspected TB cases were of age 55+ among males, females and both sexes together.

3.19.4 ***Influence of suspicion about having TB on action taken :*** Asked whether their suspicion of having TB had influenced their action taking, 57.1% in rural areas and 41.7% in urban areas stated that it influenced them to seek proper health facilities for diagnosis and treatment. It is significant that their suspicion had influenced much more than referral by doctors whom they had contacted repeatedly. There was no influence on 42.9% (rural) and 41.7% (urban). To the question whether their suspicion led to their seeking advice of friends, relatives and neighbours, 100% (rural) and 91.7% (urban) answered in the negative. **(This may be due to fear induced by stigma).**

3.20 Cost

3.20.1 ***Calculation of average cost :*** The average for total cost and its two components viz., direct cost and indirect cost as well as for the sub-components of each of these under different cost heads are given in Tables 44A to 47A. The average total cost is based on the distribution of total cost and not on the total of the average costs for its two components. Similarly, the average for direct and indirect costs are based on their distributions and not on the total of the average for costs for their sub-components. The latter are not based on uniform class intervals (ranges) of cost and have different mode values. Further, the average cost of sub-components/components are more likely to be influenced by extreme values than average of total cost because these extreme values form a comparatively larger proportion of the sub-component's/component's distribution than of distribution of total cost. This is illustrated by three distributions each given in Tables 44A and 45A. The distribution of indirect cost for rural CS formed an inverted J-distribution with nil values to the extent of 74.1% of the total and yet did not influence the distribution of total cost which resembles a normal distribution. Due to these two reasons

Table 44A

Distribution of rural CS by direct, indirect and total cost (Raichur district)

Cost Range (Rs.)	Direct Cost		Indirect Cost		Total Cost	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Nil	1	1.2	60	74.1	1	1.2
001 – 099	5	6.2	4	4.9	3	3.7
100 – 199	5	6.2	1	1.2	5	6.2
200 – 599	27	33.3	10	12.3	23	28.4
600 – 999	20	24.7	4	4.9	20	24.7
1000 – 1999	15	18.5	2	2.5	20	24.7
2000 – 3999	7	8.6	0	0.0	8	9.9
4000+	1	1.2	0	0.0	1	1.2
Total	**81**		**81**		**81**	
Mean Cost (Rs.)	***913***		***121***		***1,038***	

Table 45A

Distribution of urban CS by direct, indirect and total cost (Raichur district)

Cost Range (Rs.)	Direct Cost		Indirect Cost		Total Cost	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Nil	1	1.1	50	56.8	0	0.0
001 – 099	3	3.4	3	3.4	1	1.1
100 – 199	7	8.0	8	9.1	7	8.0
200 – 599	30	34.1	10	11.4	28	31.8
600 – 999	9	10.2	3	3.4	7	8.0
1000 – 1999	18	20.5	7	8.0	18	20.5
2000 – 3999	13	14.7	5	5.6	17	19.3
4000+	7	8.0	2	2.3	10	11.4
Total	**88**		**88**		**88**	
Mean Cost (Rs.)	***1,411***		***532***		***1,822***	

given above, the addition of average costs for sub-components / components gives a different and less reliable value for average of total cost than that obtained from the distribution of total cost. This is more striking in the cases of sub-components of indirect cost given under item 2 of Tables 46A and 47A.

3.20.2 ***Distrihution of direct, indirect and total costs:*** Tables 44A and 45A show the distribution of direct, indirect and total costs and the averages for these. Indirect costs incurred by both rural and urban CS formed inverted J-distributions with more than 50% of CS having no indirect cost. The distribution of direct and total costs incurred by rural CS were unimodel with modes in the cost range of Rs.200-599 for direct cost and total cost. The distributions of direct cost and total cost incurred by urban CS were bi-modal with one mode in the cost range of Rs.200-599 and the other in the cost range of Rs.1,000-1,999. Proportion having direct cost of Rs.1,000 or more was less (28.3%) among rural CS compared to that among urban CS (43.2%). Those incurring total cost of Rs.1,000 or more was also less among rural CS (35.8%) compared to that among urban cS (51.2%). The overall proportion was 32.8% for direct cost and 40.4% for total cost (weighted percentages for rural and urban combined). The average total cost incurred by urban CS (Rs.1,822) was about 1.8 times of that incurred by rural CS (1,038). Averages for both direct and indirect costs were higher for urban CS compared to rural CS, the latter being more than four times higher.

3.20.3 ***Average cost under different cost heads during each action :*** Among rural CS, averages for direct and total costs were maximum during fourth action (Table 46A). Excluding this, which was based on four CS only, direct, indirect and total average costs decreased steadily with increase in the number of actions. Under direct cost, the maximum contribution was from cost of medicines which was far more than any of the other components. Excluding fourth action, cost of medicines decreased steadily with increase in the number of actions. Consultation cost was a

Table 46A :

Mean cost under different cost heads for each action by rural CS (Raichur District)

Cost Head	Cost (in Rs) for action					
	1	2	3	4	5	All
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Direct cost						
(a) Travel	32	58	63	30		79
(b) Consultation	103	89	59	194		157
(c) Sputum examination	2	4	3	9		5
(d) X-Ray examination	7	18	15	31		21
(e) Medicines	393	327	228	525		618
(f) Special diet	<1	0	0	0		<1
(g) Tonics	12	7	0	0		17
(h) Medicine collection	0	0	0	0		0
(i) Check up examination	0	0	0	0		0
Sub total	**513**	**481**	**387**	**862**		913
2. Indirect cost :						
(a) Wage loss	37	18	19	44		51
(b) Substitution	28	29	7	0		36
(c) Others	0	2	0	8		2
Sub total	**82**	**49**	**32**	**38**		121
3. Total cost	**596**	**542**	**409**	**862**		**1038**
No. of CS	81	48	17	4		81

poor second followed by travel cost of at third place. Under indirect cost, wage loss and cost for substitution of labour were of equal importance. Urban CS showed a different picture (Table 47A). Average for direct, indirect and total costs were less for second but did not differ much for the other actions except for indirect cost at first action which was much less than at third and fourth actions. Major part of direct cost was for cost of medicines followed by cost of consultation (second) and travel cost (third) as in the case of rural CS. Cost of medicines was much less at second action. Wage loss became the major component of indirect cost and increased steadily with increase in the number of actions.

3.20.4 ***Contribution of direct cost during each action :*** Proportion of direct cost out of total cost incurred by rural CS increased steadily from 86.1% during first action to 88.7% during second action, to 94.6% during third action and to 100% during fourth action. There was no such trend for urban CS. It was highest for third action (84.3%) and lowest for fourth action (63.8%) with 77.9% and 71.3% for first and second actions. This proportion was higher among rural CS compared to that among urban CS for each action. The overall contribution of direct cost was higher for rural CS (88.0%) compared to urban CS (77.4%). For 76.6% of rural CS and 63.6% of urban CS direct cost formed 80% or more of the total cost. While the contribution of direct cost was between 40% and 79% for 16.1% of rural CS and 25.0% of urban CS, it was less than 40% for 7.4% of rural CS, and 11.3% of urban CS.

3.20.5 ***Cost incurred by rural CS at Health faclities:*** Average cost incurred by rural CS was Rs.657 for single actions and Rs.1,221 for multiple actions, for consulting PMP and Rs.1,609 for multiple actions for consulting GHFs at primary and secondary levels (Table 48A). Distributions of cost for consultations with PMP (both for single and multiple actions) were unimodal with mode in the cost range of Rs.200-599 for single actions and in cost range of Rs.1,000-2,999 for multiple actions. For multiple actions by GHFs only, the distribution was normal with mode in the cost

Table 47A

: **Mean cost under different cost heads for each action by urban CS. (Raichur District)**

Cost Head	Cost (in Rs) for action					
	1	2	3	4	5	All
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Direct cost						
(a) Travel	32	40	114	6		60
(b) Consultation	98	64	87	81		147
(c) Sputum examination	3	<1	9	3		6
(d) X-Ray examination	13	5	28	18		24
(e) Medicines	740	392	662	662		1096
(f) Special diet	0	0	12	0		3
(g) Tonics	13	11	14	4		23
(h) Medicine collection	0	0	0	0		0
(i) Check up examination	0	0	0	0		0
Sub total	**889**	**486**	**896**	**750**		**1411**
2. Indirect cost :						
(a) Wage loss	78	97	140	181		108
(b) Substitution	41	42	43	112		55
(c) Others	4	< 1	9	4		7
Sub total	**288**	**208**	**570**	**538**		**532**
3. Total cost	**1141**	**682**	**1063**	**1175**		**1822**
No. of CS	88	44	21	8	1	88

Table 48A

Distrbution of cost incurred by rural CS at different health facilities.(Raichur District)

No. of actions Type of Health facility	Cost Range (Rs)										Mean Cost (Rs)
	001-199		200-599		600-999		1000-2999		3000+		
	NO	%	NO	%	NO	%	NO	%	NO	%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A. By No.of actions and type											
1. **Single action at :**											
(a) PMP	8	25.8	11	35.5	7	22.6	5	16.1	0	0.0	657
(b) PHC											
(c) GH			1								NC
(d) NGH											
(e) Sanatorium											
2. Multiple action at :											
GHF's of same level :											
(a) PMP	0	0.0	8	24.2	8	24.2	16	48.5	1	3.0	1221
3. Multiple actions at both levels :											
(a) GHF's only	0	0.0	2	18.2	4	36.4	3	27.3	2	18.2	1609
(b) GHF's and SHF's					1		2				NC
(c) Others	1		1								
Total	**9**		**23**		**20**		**26**		**3**		
B. By type of HF											
(a) Govt.	1		2		0		0		0		NC
(b) Private	8	12.1	19	28.8	15	22.7	22	33.3	2	3.0	1025
(c) Govt. & Private	0	0.0	2	16.7	5	41.7	4	33.3	1	8.3	1300
Total	**9**		**23**		**20**		**26**		**3**		

range of Rs.600-999. The lower part of Table 48A shows that the average cost was Rs.1,025 for private health facilities and Rs.1,300 for consulting both types of facilities. While the distribution of cost was normal for those consulting both types of faclities with mode in the cost range of Rs.600-999, it appears to be bi-modal for those using only private facilities with modes in the cost ranges of Rs.200-599 and Rs.1,000-2,999.

3.20.6 ***Cost incurred by urban CS at Health facilities :*** Unlike for rural CS, the average cost incurred by urban CS for multiple actions for consulting PMP at primary level was almost the same as that for single actions, the average cost being Rs.1,346 and Rs.1,427 respectively (Table 49A). Average cost for single action to consult GH was not different (Rs.1,338). These costs were only half of the average cost for multiple consultations to both primary and secondary GHFs (Rs.2,619). The average cost for multiple actions for consulting both GHFs and SHFs (mainly sanatorium) was Rs.3,214 (the highest of the averages shown in Table 48A and 49A), which, however was based on only 7 CS. The corresponding four cost distributions (excluding that for GHFs and SHFs) were bi-modal with modes in the cost range of Rs.200-599 and Rs.1,000-2,999, except that for multiple contacts with GHFs only which had the second mode in cost range of Rs.3,000+. The lower part of Table 49A shows that cost distribution for all the three types of facilities were bi-modal with peaks in the cost range of Rs.200-599 and Rs.1,000-2,999. While average cost was the same for government facilities (Rs.1,222) and private facilities (Rs.1,384) it was doubled for their combined use. The higher figure for the last group (Rs.2,665) was the second highest of the averages shown in Tables 48A and 49A and was more than double of the corresponding average for rural CS.

3.20.7 ***Influence of Sex :*** Table 50A shows that the distribution of cost by sex is biomodal except for rural female CS for whom it was unimodal with mode in cost range of Rs.200-599. For the other three distributions, the modes were at cost range of Rs.200-599 and Rs.1,000-2,999. While the average

Table 49A :

Distrbution of cost incurred by Urban CS at different health facilities.(Raichur District)

No. of actions Type of Health facility	Cost Range (Rs)										Mean Cost (Rs)
	001-199		200-599		600-999		1000-2999		3000+		
	NO	%	NO	%	NO	%	NO	%	NO	%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A. By **No.of actions and type**											
1. Single action at :											
(a) PMP	4	*12.9*	9	*29.0*	3	*9.7*	11	*35.5*	4	*12.9*	1427
(b) PHC											
(c) GH	2	*25.0*	4	*50.0*	0	*0.0*	1	*12.5*	1	*12.5*	1338
(d) NGH			3								
(e) Sanatorium			1								
2. Multiple action at :											
GHF's of same level :											
(a) PMP	1	*7.1*	4	*28.6*	2	*14.3*	5	*35.7*	2	*14.3*	1346
3. Multiple actions at both levels :											
(a) GHF's only	1	*4.2*	6	*25.0*	2	*8.3*	7	*29.2*	8	*33.3*	2619
(b) GHF's and SHF's			1				3		3		3214
(c) Others											
Total	**8**		**28**		**7**		**27**		**18**		
B. By type of HF											
(a) Govt.	2	*22.2*	5	*55.6*	0	*0.0*	1	*11.1*	1	*11.1*	1222
(b) Private	5	*9.6*	17	*32.7*	6	*11.5*	16	*30.8*	8	*15.4*	1384
(c) Govt. & Private	1	*3.7*	6	*22.2*	1	*3.7*	10	*37.0*	9	33.3	2665
Total	**8**		**28**		**7**		**27**		**18**		

Table 50A :
Distrbution of total cost for different Population Groups. (Raichur District)

No. of actions Type of Health facility	Cost Range (Rs)										Mean Cost (Rs)
	001-199		200-599		600-999		1000-2999		3000+		
	NO	%	NO	%	NO	%	NO	%	NO	%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. R : Sex :											
(a) Females	5	*14.3*	12	*34.3*	10	*28.6*	6	*17.1*	2	*5.7*	960
(b) Males	4	*8.7*	11	*23.9*	10	*21.7*	20	*43.5*	1	*2.2*	1097
2. U : Sex :											
(a) Females	1	*2.9*	14	*40.0*	1	*2.9*	13	*37.1*	6	*17.1*	1633
(b) Males	7	*13.2*	14	*26.4*	6	*11.3*	14	*26.4*	12	*22.6*	1947
3. R : Age group :											
(a) 15-34	1	*8.3*	3	*25.0*	3	*25.0*	5	*41.7*	0	*0.0*	994
(b) 35-54	1	4.2	9	37.5	6	25.0	5	*20.8*	3	*12.5*	1257
(c) 55+	7	15.6	11	24.4	11	24.4	16	35.6	0	0.0	933
4. U : Age group :											
(a) 15-34	0	*0.0*	5	*29.4*	1	*5.9*	5	*29.4*	6	35.3	2335
(b) 35-54	3	8.1	14	37.8	1	2.7	11	29.7	8	21.6	2043
(c) 55+	5	14.7	9	26.5	5	14.7	11	32.4	4	11.8	1325
5. R : Type of Family :											
(a) Nuclear	1	4.5	8	36.4	5	22.7	8	36.4	0	0.0	969
(b) Joint	8	14.8	15	27.8	12	22.2	16	29.6	3	5.6	1056
6. U : Type of Family :											
(a) Nuclear	3	7.7	10	25.6	2	5.1	13	33.3	11	28.2	2328
(b) Joint	5	10.9	17	37.0	5	10.9	13	28.3	6	13.0	1375
7. R : No.of earning members :											
(a) 1	2	*11.1*	6	*33.3*	6	*33.3*	4	22.2	0	0.0	749
(b) 2	3	*12.5*	7	*29.2*	3	*12.5*	11	*45.8*	0	*0.0*	1043
(c) 3+	4	*10.3*	*10*	*25.6*	11	*28.2*	11	*28.2*	3	*7.7*	1169
8. U : No.of earning members :											
(a) 1	0	*0.0*	9	*37.5*	1	*4.2*	7	*29.2*	7	*29.2*	2192
(b) 2	2	*9.5*	6	*28.6*	3	*14.3*	7	*33.3*	3	*14.3*	1968
(c) 3+	6	*14.6*	12	*29.3*	3	*7.3*	*12*	*29.3*	8	*19.5*	1551

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
9. R : Highest Education Status in HH :											
(a) Illiterate	1	4.5	12	54.6	2	9.1	6	27.3	1	4.5	948
(b) Below SSC	5	15.6	4	12.6	9	28.1	13	40.7	1	3.1	1127
(c) SSC	3	11.1	7	25.9	9	33.3	7	25.9	1	3.7	1006
10. U : Highest Education Status in HH :											
(a) Illiterate	2	10.0	7	35.0	4	20.0	4	20.0	3	15.0	1395
(b) Below SSC	5	11.6	12	27.9	3	7.0	13	30.2	10	23.3	1937
(c) SSC	1	4.0	9	36.0	0	0.0	10	40.0	5	20.0	1966
11. R : Occupation :											
(a) Unemployed & Students	5	20.0	7	28.0	7	28.0	6	24.0	0	0.0	798
(b) Housewives	1	7.1	6	42.9	2	14.3	3	21.4	2	14.3	1336
(c) Employed	3	7.1	10	23.8	11	26.2	17	40.5	1	2.4	1083
12. U : Occupation :											
(a) Unemployed & Students	3	17.6	3	17.6	2	11.8	7	41.2	2	11.8	1509
(b) Housewives	1	4.5	10	45.5	0	0.0	7	31.8	4	18.2	1593
(c) Employed	4	8.2	15	30.6	5	10.2	13	26.5	12	24.5	2033
13. R : Duration of Cough (weeks)											
(a) 3 - 13	1	8.3	8	66.7	1	8.3	2	16.7	0	0.0	575
(b) 14 - 26	2	11.8	8	47.0	2	11.8	5	29.4	0	0.0	882
(c) 27 - 52	0	0.0	5	23.8	9	42.9	7	33.3	0	0.0	986
(d) 53 +	6	19.4	2	6.4	8	25.8	12	38.7	3	9.7	1337
14. U : Duration of Cough (weeks)											
(a) 3 - 13	3	21.4	5	35.7	1	7.1	3	21.4	2	14.3	1191
(b) 14 - 26	1	7.7	9	69.3	1	7.7	1	7.7	1	7.7	1104
(c) 27 - 52	1	6.7	3	20.0	0	0.0	8	53.3	3	20.0	1677
(d) 53 +	3	6.5	11	23.9	5	10.9	15	32.6	12	26.1	2264

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
15. R : Family size :											
(a) 1 - 6	2	5.0	16	40.0	8	20.0	14	35.0	0	0.0	928
(b) 7 +	7	17.1	7	17.1	12	29.3	12	29.3	3	7.3	1146
16. U : Family size :											
(a) 1 - 6	3	5.6	20	37.0	5	9.2	13	24.1	13	24.1	1987
(b) 7 +	5	14.7	8	23.5	2	5.9	14	41.2	5	14.7	1560
17. R : Religion & Caste :											
(a) SC/ST	6	17.1	7	20.0	11	31.4	11	31.4	0	0.0	956
(b) BC	2	9.1	7	31.8	5	22.7	6	27.3	2	9.1	1168
(c) Other Hindus	0	0.0	4	30.8	2	15.4	7	53.8	0	0.0	1146
18. U : Religion & Caste :											
(a) SC/ST	4	10.5	15	39.5	5	13.2	7	18.4	7	18.4	1632
(b)BC	1	5.3	7	36.8	1	5.3	6	31.6	4	21.1	1545
(c) Other Hindus	0	0.0	0	0.0	0	0.0	3	50.0	3	50.0	3333

cost was the same for rural males and females (Rs.1,097 and Rs.960/- respectively), it was higher for males (Rs.1,947) compared to females (Rs.1,633) among urban CS. Those **spending Rs.1,000 or more was lowest for rural females (22.8%) compared to rural males and urban males and females 45.7% to 54.2%).**

3.20.8 ***Influence of Age :*** **Among urban CS, average cost steadily decreased with increase in age** from Rs.2,335 to Rs.1,325. Even this lowest cost for urban CS was higher than that for rural CS of age 35-54 which itself was higher than average cost for the other two age groups of rural CS (Rs.994 and Rs.933) (Table 50A). Rural CS of all the three age groups had unimodal distributions, those for 15-34 and 55+ age groups with mode in cost range of Rs.1,000 – 2,999 and that for 35-54 age group in cost of Rs.200-599. Urban CS had bimodal distributions for all age groups, with the first mode in cost range of Rs.200-599. The second mode was in cost range of Rs.1,000-2,999 for 35-54 and 55+ age groups and in cost range of Rs.3,000+ for 15-34. **Among urban CS, the proportion spending Rs.1,000 or more steadily decreased with increase in age from 64.7% for 15-34 to 51.3% for 35-54 and to 44.2% for 55+. But there was no such trend among rural CS,** this proportion being highest (41.7%) for age 15-34 and about equal (33.3% and 35.6%) for the other two age groups.

3.20.9 ***Influence of type of Family :*** Average cost was higher for urban CS of nuclear families compared to that of CS in joint families, but not so for rural CS (Table 50A). The distributions were bimodal for all with modes at Rs.200-599 and Rs.1,000-Rs.2,999. Among urban CS, the proportion spending Rs.1,000 or more was higher in nuclear families compared to joint families but not so among rural CS. The relevant figures were : 36.4% and 35.2% respectively among rural CS and 61.5% and 41.3% respectively among urban CS.

3.20.10 ***Influence of number of earning members in the family* : Surprisingly, the average cost for urban CS decreased steadily with increase in the number of earning members** from Rs.2,192 to Rs.1,551 (Table 50A). But **rural CS showed the opposite trend**, the average cost having increased from Rs.749 to Rs.1,169, but the differences were smaller. Rural CS in families with one earning member had the lowest average cost among the six groups under this item in Table 50A. All the distributions were bimodal except for rural CS in families with one and 3+ earning members which had unimodal distributions with the mode at the combined cost range of Rs.200-999 for the former and Rs.600-2,999 for the latter. All the other four distributions had modes in cost range of Rs.200-599 and Rs.1,000-2,999. The proportion spending Rs.1,000 or more was higher for urban CS in families with one earning member (58.4%) compared to that in the other two groups (47.6% and 48.8%). Among rural CS, this percentage was lowest in families with one earning member (22.2%) compared to the other two groups (45.8% and 35.9%).

3.20.11 ***Influence of Highest Education status in HH* : Among rural CS, the average cost was lowest in families with only iliterates** (Rs.948) followed by CS in families with highest education status of SSC+ (Rs.1,006) and by CS in families with the highest education status of below SSC (Rs.1,127), (Table 50A). Among urban CS, average cost increased steadily with increase in educational level from Rs.1,395 to Rs.1,966. The cost for each group was higher among urban CS compared to rural CS. Out of six groups four (viz: illiterates and below SSC groups among rural CS and below SSC and SSC+ groups among urban CS) had bimodal distributions. While the second mode was in cost range of Rs.1,000 – 2,999 for all, the first mode was in cost range of Rs.1-199 for below SSC group among rural CS, and in cost range of Rs.200-599 for the other three groups. Among the two unimodal distributions, SSC+ group among rural CS had mode in cost range of Rs.600-999 and

the illiterates group among urban CS had mode in cost range of Rs.200-599. The percentage of **urban CS spending Rs.1,000 or more showed an increasing trend with increase in education.** Relevant figures were 35.0% for CS in families with only illiterates, 53.5% for CS in families with highest education status of below SSC and 60.0% for CS in families with highest education status of SSC+. There was **no such trend among rural CS** for whom this proportion was higher in the below SSC group (43.8%) compared to the other two groups (30.8% and 29.6%).

3.20.12 ***Influence of Occupation :*** Among rural CS, average cost was highest for housewives (Rs.1,336) followed by employed (Rs.1,083) and unemployed and students of age 15 or more (Rs.798) (Table 50A). Among urban CS, average cost was higher for employed (Rs.2,033) compared to the other two groups (Rs.1,509 and Rs.1,593). Among the six groups, average cost was least (Rs.798) for unemployed and students among rural CS and highest (Rs.2,033) among employed urban CS, the latter being 2.6 times the former. All distributions of cost were bimodal except that for unemployed and students and employed among rural CS which had unimodal distributions with the mode in the combined cost range of Rs.200-999 for the former and Rs.1,000-2,999 for the latter. Out of the other four, all had the second mode in cost range of Rs.1,000-2,999. The first mode was in cost range of Rs.200-599 for housewives among rural and urban CS and among employed urban CS and in the combined cost range of Rs.1-599 for unemployed and students among urban CS. **Proportion who had spent Rs.1,000 or more among rural CS was least (24.0%) for unemployed and students and highest (42.9%) for employed, with housewives in between (35.7%). Among urban CS the proportion was the same for all the three groups (50.0% to 53.0%).**

3.20.13 ***Influence of duration of cough :*** As could be expected, **average cost increased with increase in duration of cough** among both rural and urban CS except for a slight drop for 14-26 weeks among urban CS. (Table 50A). **Average cost was much higher among urban CS**

compared to rural CS for all the four durations of cough. Out of eight distributions of cost six were bimodal, all with the second mode in the cost range of Rs.1,000-2,999. Five had the first mode in cost range of Rs.200-999 and the other in cost range of Rs.1-199. While rural CS with duration of 27-52 weeks had the mode in cost range of Rs.600-999, urban CS with duration of 14-26 weeks had the mode in cost range of Rs.200-599. Proportion who had spent Rs.1,000 or more was higher among urban CS compared to rural CS for all durations except 14-26 weeks. This proportion steadily increased with increase in duration among rural CS from 16.7% for 3 –13 weeks to 29.4% for 14-26 weeks, to 33.3% for 27-52 weeks and to 48.4% for 53+ weeks. Among urban CS, this proportion was highest for 27-52 weeks (73.3%) followed by 53 weeks or more (58.7%), 3-13 weeks (35.7%) and 14-26 weeks (15.4%). This last proportion was one of the least among all the population groups shown in Table 50A, others being

for duration 3-13 weeks among rural CS (16.7%), rural CS in families with one earning member (22.2%) and female rural CS (22.8%).

3.20.14 ***Influence of family size :*** While average cost was somewhat less for rural CS in families of size 1-6 (Rs.928) compared to those in families of size 7+ (Rs.1,146), it was the opposite for urban CS, with families of size 7+ having less cost (Rs.1,560) compared to those in families of size 1-6 (Rs.1,987). Three out of four distributions were bimodal with the first mode in cost range of Rs.200-599 and the second mode in cost range of Rs.1,000-2,999. The other viz., rural CS in families of size 7+ had a unimodal distribution with mode in the combined cost range of Rs.600-2,999. Proportion incurring Rs.1,000 or more among rural CS of family sizes 1-6 and 7+ did not differ (35.0% and 36.6%). Among urban CS, this proportion was 48.2% for those in families of size 1-6 and 55.9% for those in larger families.

3.20.15 **Influence of Religion and Caste :** Among rural CS, average cost was somewhat less for SC/ST (Rs.956) compared to that for BCs (Rs.1,168) and Other Hindus (Rs.1,146). The **highest cost was observed for other Hindus among urban CS (Rs.3,333) which was much higher than those for SC/ST (Rs.1,632) and BCs (Rs.1,545). This was also the highest cost among all the groups shown in Table 50A.** The distribution of cost was unimodal for rural SC/ST (with mode in the combined cost range of Rs.600-2,999 and for urban Other Hindus (with 50% of frequencies in the two cost ranges of Rs.1,000-2,999 and Rs.3,000+. Proportion of CS **spending Rs.1,000 or more was highest for Other Hindus among rural and urban CS and least for SC/ST,** with BCs in between. Further, **this proportion for each group was more among urban CS compared to rural CS.**

Chapter 4

DISTRICT COMPARISON

CHAPTER 4

DISTRICTWISE COMPARISON

4.1 Prevalence of Sickness

4.1.1. ***Prevalence of Other Symptoms :*** **Prevalence rate for other symptoms (OS)** was 15.2% in Mysore district* and 18.0% in Raichur district* (Table 51, Cols 4 & 5). This rate **did not differ much between the two districts for any of the groups formed according to sex, age, type of family, family size and education status.**

4.1.2 ***Prevalence of cough :*** Table 51 (Cols 6 & 7) show that **there was hardly any difference between the two districts for prevalence rate for cough (CO) in any of the groups formed according to sex, age, type of family, family size and education status. Prevalence rate was 6.4% in Mysore and 5.1% in Raichur.**

4.1.3 ***Prevalence of CS :*** As in the case of OS and CO, **prevalence rate for CS also did not differ much between the two districts for any of the groups formed according to sex, age, type of family, family size and education status** (Table 51, Cols 8 & 9). Prevalence rate was 1.4% in Mysore and 1.1% in Raichur.

4.1.4 ***Prevalence of self-suspected TB :*** **Prevalence of self-suspected TB was 0.22% in Mysore and 0.13% in Raichur** (Table 52). There was not much difference between the two districts for prevalence rates by sex and age.

*** hereinafter, Mysore and Raichur are used for the two districts and not for towns by the same names.**

Table - 51

Prevalence Rate (PR) for cough (CO) other symptoms (OS) and chest symptomatics (CS) in different population groups

Population Groups	Population (all ages)		PR-OS		PR-CO		PR-CS	
	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1 **Total**	**20646**	**20323**	**15.2**	**18.0**	**6.4**	**5.1**	**1.4**	**1.1**
2 **Sex: Female**	10182	10128	16.9	20.7	5.8	5.0	1.0	0.8
Male	10464	10195	13.7	15.4	6.9	5.4	1.8	1.3
3 **Age: 0-14**	5967	7767	9.2	14.4	4.9	4.3	-	-
15-34	7738	6897	13.9	16.4	4.7	3.4	0.8	0.5
35-54	4620	3962	22.3	23.5	8.8	6.5	2.8	2.1
55+	1995	1690	24.4	27.4	11.4	12.9	5.0	6.1
4 **Type of family:**								
Nuclear	9436	9328	18.6	20.9	7.2	5.2	1.3	0.8
Joint	9035	7894	13.1	16.6	5.9	5.5	1.7	1.6
Extended	2175	3101	11.4	13.3	4.0	4.1	0.7	0.5
5 **Family size:**								
1-3	1921	1488	25.5	29.6	7.5	7.8	1.6	1.9
4-6	11539	8883	16.6	20.2	6.7	5.2	1.3	1.1
7-9	4043	6116	11.3	15.5	6.7	5.1	1.9	1.1
10+	3143	3836	9.6	13.1	3.8	4.1	0.9	0.8
6 **Educational status:**								
Illiterate	8199	8166	18.9	21.4	7.2	6.3	2.4	0.7
Below SSC	6947	6162	13.5	16.0	5.6	4.3	0.6	1.6
SSC+	3110	2542	14.8	14.5	4.4	2.7	0.8	2.5

Table 52

Prevalence rate (%) of self suspected and reportedly diagnosed TB cases by age sex groups in Mysore and Raichur Districts

District	Sex		Age Group			Total
	Female	Male	15-34	35-54	55+	(15+ years)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Self suspected TB						
Mysore	0.18	0.25	0.16	0.28	0.27	0.22
Raichur	0.13	0.15	0.05	0.15	0.42	0.13
Reportedly diagnised TB						
Mysore	0.23	0.29	0.22	0.33	0.23	0.26
Raichur	0.05	0.14	0.08	0.13	0.14	0.09

Table - 53

Duration of sickenss for persons with four main groups of symptoms

Symptom group District	Duration of sickness (in days)				
	<8 days	8-14	15-21	22-28	29+
(1)	(2)	(3)	(4)	(5)	(6)
Cough -% - Mysore	60.3	9.6	6.7	0.4	23.0
Raichur	68.2	8.9	2.4	2.4	18.1
Fever - % - Mysore	84.6	6.9	5.0	0.2	3.2
Raichur	81.1	6.6	4.0	4.7	3.6
General - % - Mysore	31.5	2.7	8.1	0.8	57.0
Problems - Raichur	24.0	4.3	7.0	13.8	51.0
Diarrhoea - % - Mysore	41.7	4.3	4.9	0.4	48.8
Raichur	64.0	4.1	2.8	12.6	16.5

4.1.5 ***Prevalence of reportedly diagnosed TB:*** Some CS stated that they have been told by a HF that they were suffering from TB. Prevalence rate for such reportedly diagnosed TB was higher in Mysore (0.26%) compared to Raichur (0.09%) (Table 52). This was so for males and females and for each age group.

4.2 Duration of Sickness

4.2.1 ***Duration of Sickness due to four main groups of symptoms :*** A larger percentage of persons with cough had duration of less than 8 days in Raichur (68.2%) compared to Mysore (60.3%) (Table 53). Cough of long duration (29+ days) was more in Mysore (23.0%) compared to Raichur (18.1%). Diarrhoea group showed a similar pattern of higher frequency in Raichur for duration less than 8 days and higher frequency in Mysore for duration of 29+ days. For general problems, the pattern was different. The frequencies for the shortest and longest durations were both higher in Mysore compared to Raichur. This was compensated by a lower percentage for a duration of 22-28 days in Mysore (0.8) compared to Raichur (13.8). There was no difference between the two districts in the frequencies for different durations of fever.

4.3 Action taken by SPs

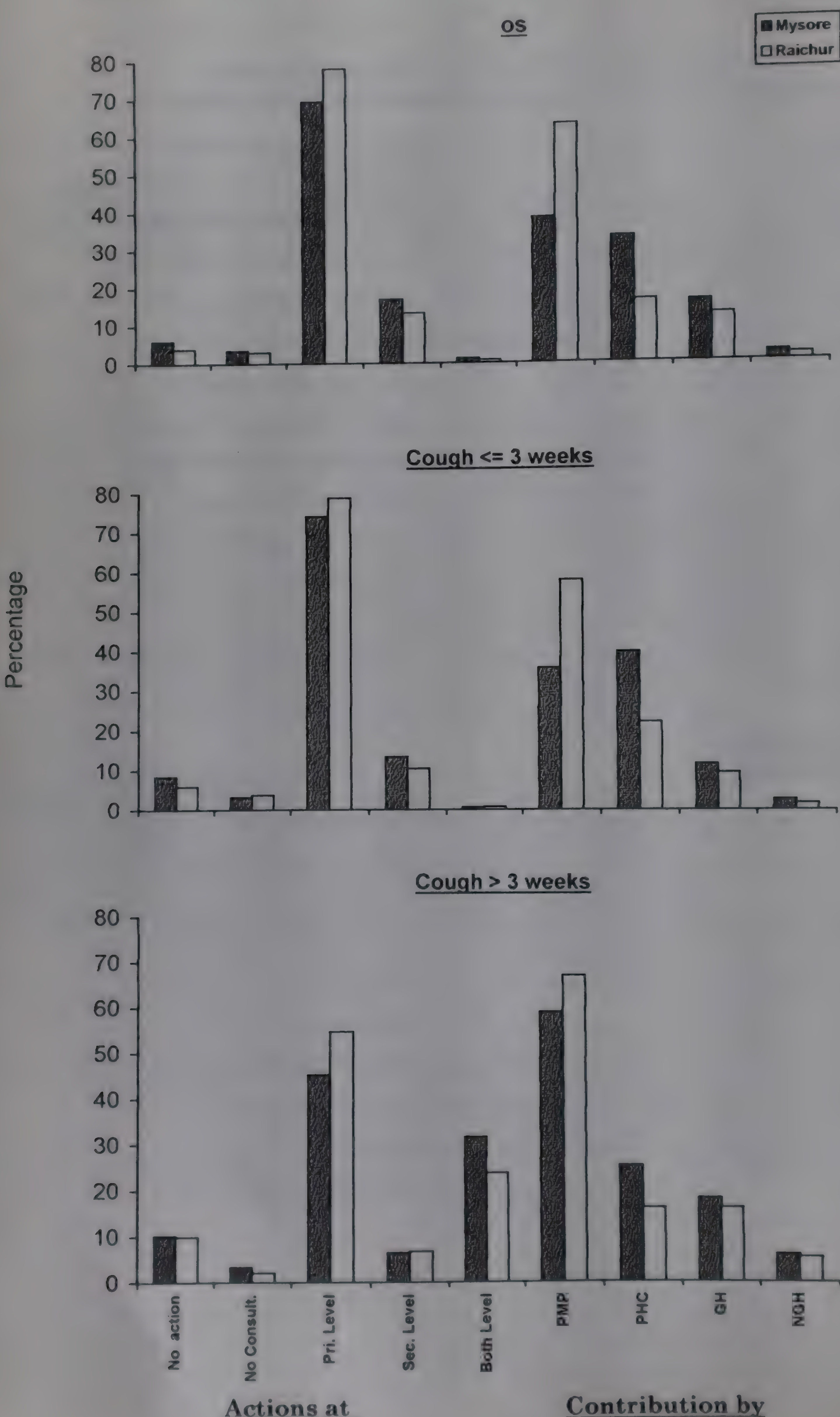
4.3.1 ***Action taken for OS :*** Action taken for OS at primary level was more in Raichur (77.7%) compared to Mysore (69.1%) (Table 54). Whereas, PMP was contacted by a much higher proportion (61.5%) in Raichur compared to Mysore (36.5%) it was just the opposite for PHC (32.0% in Mysore and only 15.7% in Raichur). Consequently, while the **contribution by PMP (62.5%) was much higher than by PHC (16.1%) in Raichur, contributions by PMP and PHC did not differ much in Mysore (Fig 1).** There was not much difference in the use of secondary level HFs or both primary and secondary level HFs or no action or actions without medical consultation in the two districts.

Table - 54

Action taken by persons suffering from cough and other symptoms during last six months in Mysore and Raichur Districts

Health Facilities Visited	Suffering from					
	OS		CO ≤ 3 weeks		CO > 3 weeks	
	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 **No action**	6.0	3.9	8.4	5.9	10.2	9.9
2 **Action without medical consultation**	3.5	3.0	3.2	3.7	3.3	2.1
3 **Primary level**	69.1	77.7	74.1	78.8	45.1	54.6
(a) PMP	36.5	61.5	34.6	56.9	26.3	41.9
(b) PHC	32.0	15.7	38.7	21.5	11.4	6.9
4 **Secondary level**	16.8	13.1	13.4	10.4	6.4	6.6
(a) GH	14.9	11.7	10.9	8.7	4.5	4.6
(b) NGH	1.8	1.3	2.5	1.7	1.1	1.2
5 **Primary and Secondary level**	1.2	0.7	0.6	0.7	31.4	23.6
6 **Total contribution (alone or in combination) by**						
(a) PMP	38.0	62.5	35.8	57.9	58.9	67.0
(b) PHC	32.8	16.1	39.8	22.1	25.2	16.0
(c) GH	15.8	12.3	11.5	9.4	18.2	16.1
(d) NGH	2.3	1.6	2.6	1.7	6.0	5.4

Fig 1 : Action taken by sick persons in Mysore and Raichur Districts



4.3.2 ***Action taken for cough of shorter duration :*** There was hardly any difference in the use of primary level HFs in action taken for cough of shorter duration by the two districts (Table 54). However, in Raichur, PMP was consulted more often (56.9%) than PHC (21.5%). **Overall contribution by PMP was much higher in Raichur (57.9%) compared to Mysore (35.8%).** That by PHC was just the opposite (39.8% in Mysore and 22.1% in Raichur). Consulting secondary level HFs or both primary and secondary level HFs or no action or action without medical consultation did not differ much between the two districts.

4.3.3 ***Action taken for cough of longer duration :*** Persons with cough for more than three weeks, showed the same pattern as OS, but the extent of difference between the two districts was smaller for the use of PMP and PHC as well as in the contribution by PMP and PHC (Table 54). Percentages for use of secondary level or no action or actions without medical consultation did not differ much between the two districts. But, unlike for the other two symptoms, the combined use of primary and secondary level HFs was more in Mysore (31.4%) compared to Raichur (23.6%)

4.4 Duration of Cough

4.4.1 ***Duration of cough among CS :*** Duration of cough for 14-26 weeks was much more frequent in Mysore (30.3%) compared to Raichur (19.4%) (Table 55). On the other hand, those with duration of 53+ weeks were less in Mysore (30.5%) than in Raichur (44.2%). (See Fig.2 also)

4.5 Number of actions taken and factors influencing it

4.5.1 ***Number of actions taken by CS:*** One action was more frequent in Raichur (38.4%) than in Mysore (29.2%) (Table 56). On the other hand, three or more actions were more common in Mysore (26.9%) compared to Raichur (19.2%). (See Fig.3 also)

Table-55

Duration of cough among CS in Mysore and Raichur Districts

District	Duration in weeks					Median
	3-13	14-26	27-39	40-52	53+	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Mysore	18.6	30.3	5.7	14.8	30.5	29.5
Raichur	14.5	19.4	2.9	18.9	44.2	49.0

Table-56

Distribution of CS by No. of actions taken in Mysore and Raichur districts

District	No.of actions						Mean/ Median
	0	1	2	3	4	5+	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mysore	16.6	29.2	27.3	18.7	6.6	1.6	1.7/2
Raichur	11.6	38.4	30.7	13.8	5.1	0.3	1.6/1.5

Fig 2 : Duration of Cough among CS in Mysore and Raichur District

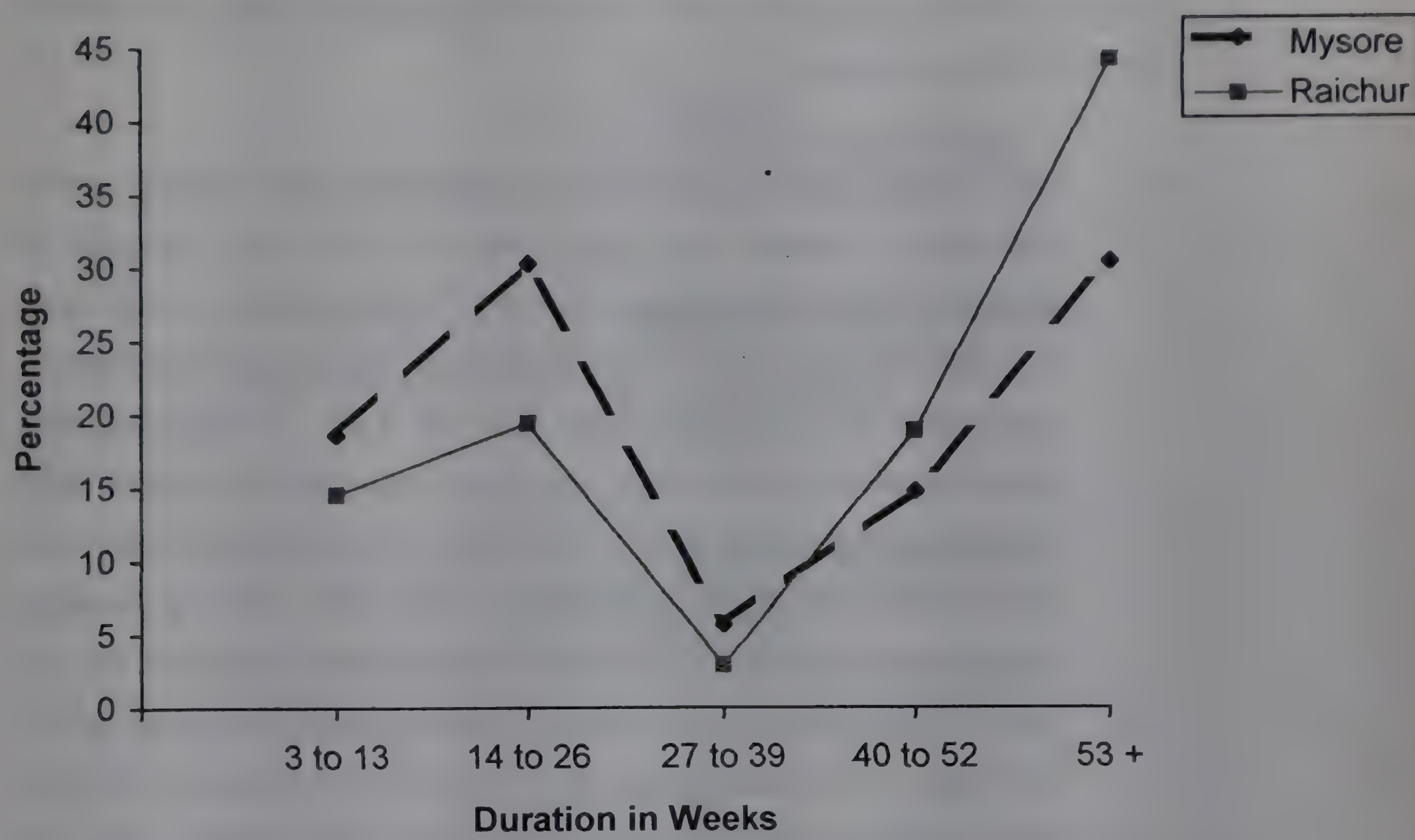
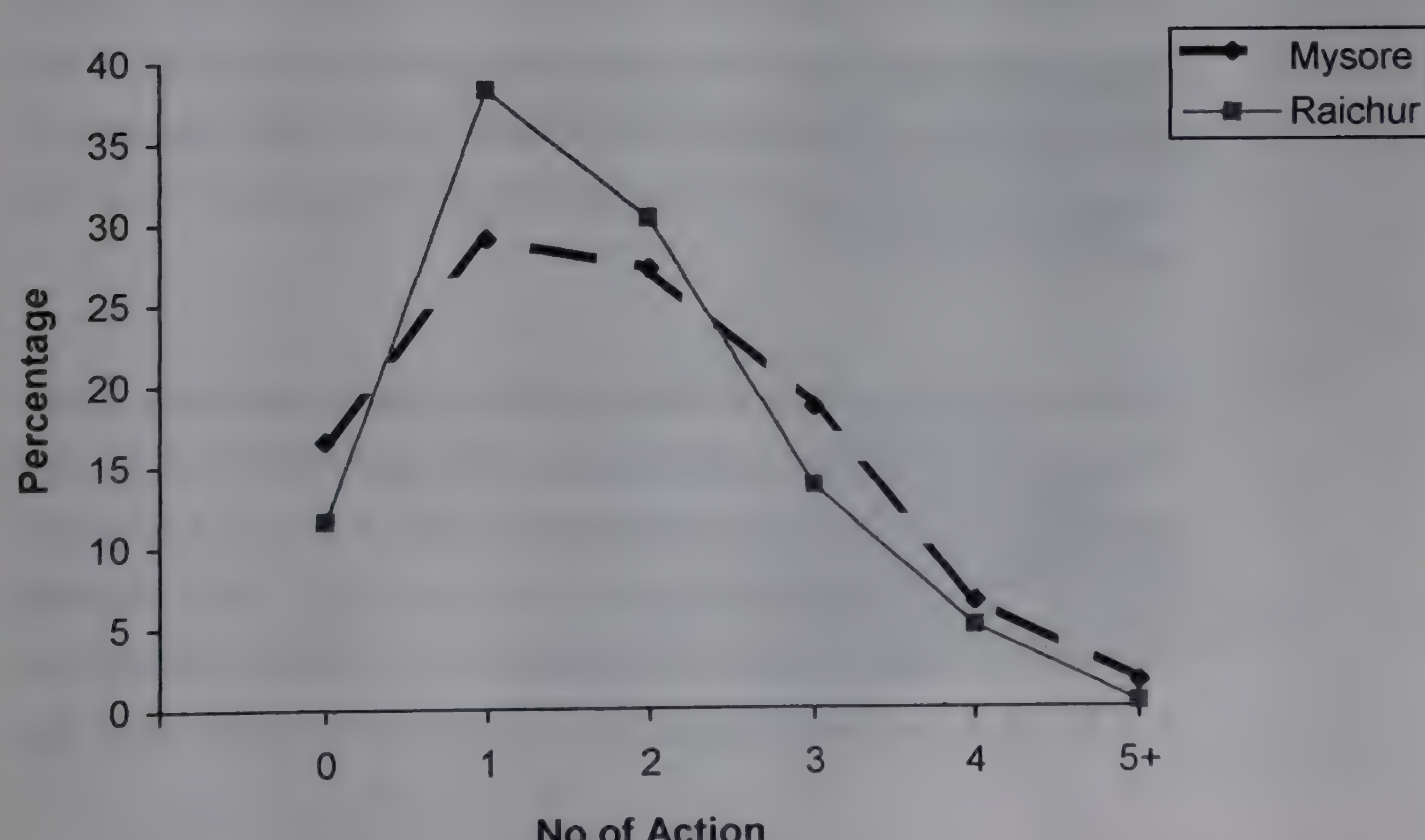


Fig 3 : No.of Actions taken By CS in Mysore and Raichur Districts



4.5.2 ***Factors influencing number of actions :*** Influence of a number of factors were studied. These gave a mixed picture. To understand the situation better, these have been arranged into groups and presented in the following paragraphs.

(a) ***Not taking action :*** **In Mysore, percentage not taking action increased steadily with age from 10.1 to 23.8 (Fig.4). In Raichur, this percentage showed decreasing trends with increase in (i) family size (from 18.3 to 5.0) and (ii) the highest education level in HH (from 17.7 to 4.8). In Mysore, this percentage for SSC+ (8.5) was less than that for below SSC (18.0) and illiterates (20.5), showing a decreasing trend with education. In both districts, it was less among females compared to males** (13.3 and 18.2 respectively in Mysore and 5.0 and 15.9 respectively in Raichur). It was highest for SC/ST (21.3) and lowest for Other Hindus (8.8) with BCs in between (15.0), in Mysore. The relative positions for these three groups were the same in Raichur (16.4 for SC/ST, 4.3 for Other Hindus and 11.0 for BCs. In Raichur, this percentage was more in nuclear families (17.5) compared to joint families (9.3) and less among housewives (7.2) compared to employed (12.9) and unemployed and students (12.0). In Mysore also, it was least among housewives (8.2). It was highest among unemployed and students (25.0) with employed in between (17.4). Duration of cough had no influence on those not taking any action.

(b) ***Taking three or more actions :*** **In Mysore, percentage taking three or more actions decreased with age from 32.2 to 23.5 (Fig.5).** It decreased from 40.0 for family size 1-3 to 19.6 for family size 7-9 by increased to 34.3 for family size 10+. But, **Raichur showed the opposite trend of increase from 10.8 for family size 1-3 to 27.5 for family size 10+. Increasing trend was also**

Fig 4 : Influence of Age , Family Size , and Highest Education Level in HH on not taking Action by CS in Mysore & Raichur District

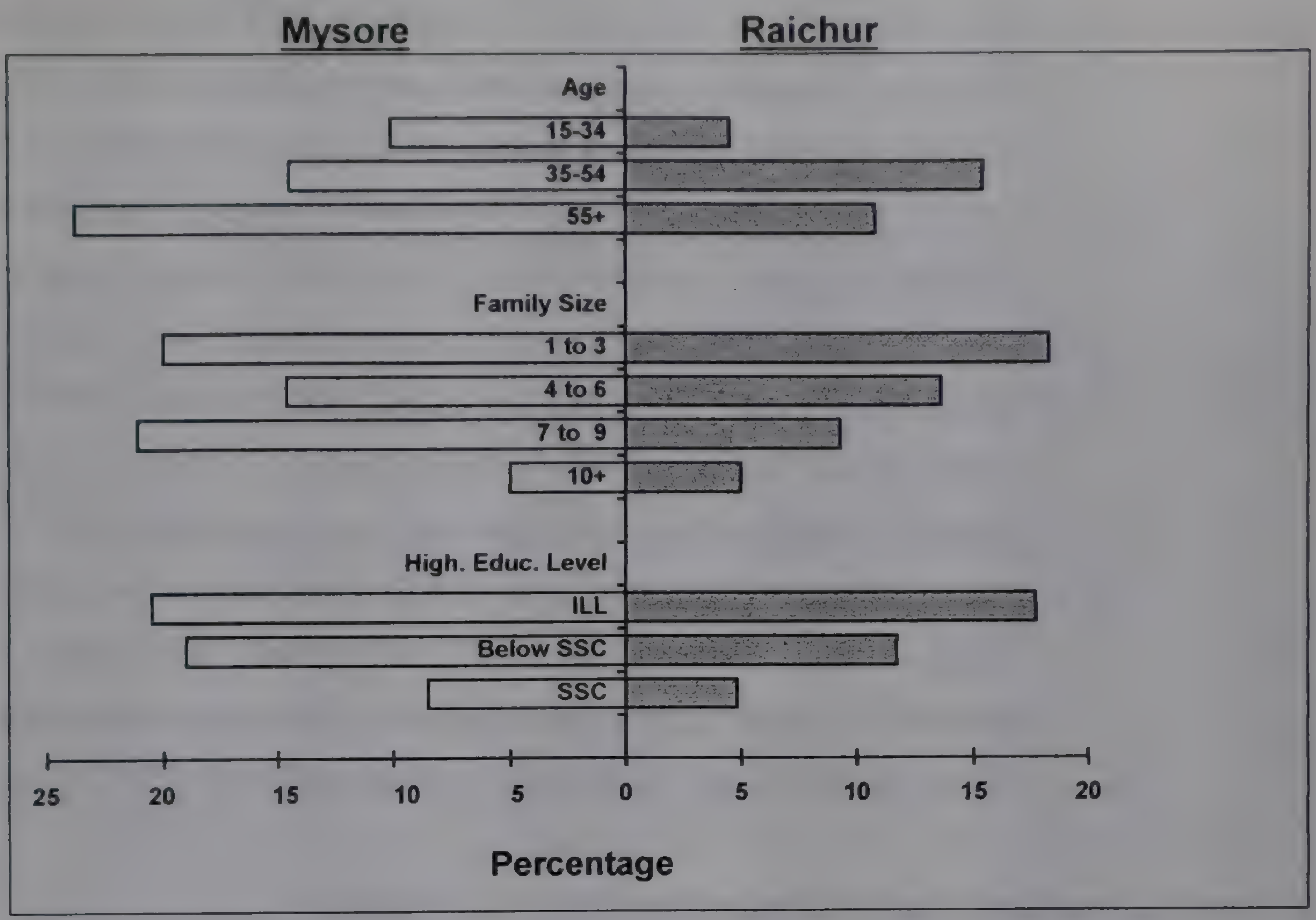
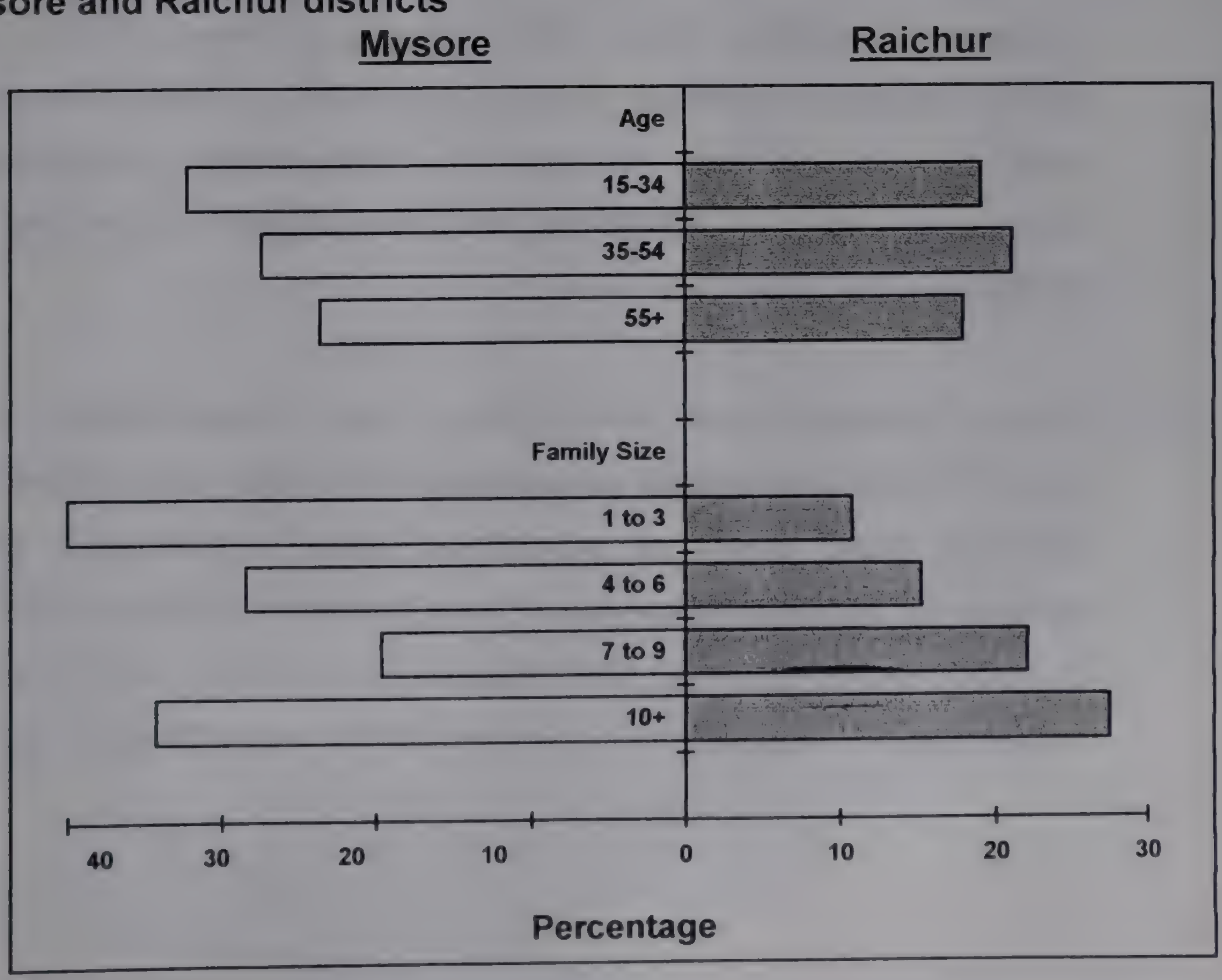


Fig 5 : Influence of Age and Family Size on 3 or more actions taken by CS in Mysore and Raichur districts



observed in both districts for duration of cough. The relevant figures were : from 2.9% for 3-13 weeks to 42.4% for 53+ weeks in Mysore and from 7.5% for 3-13 weeks to 32.1% for 53+ weeks in Raichur. This percentage was more among Raichur CS in HHs with highest education level of below SSC (26.2) compared to SSC+ (16.8) and illiterates (12.7). It was less in nuclear families (14.3) compared to joint families (20.0). It was least among Other Hindus (4.3) compared to SC/ST and BCs (both 22.7). The situation was different in Mysore with 16.0 for SC/ST, 29.5 for BCs and 52.8 for Other Hindus (who had least percentage of 4.3 only in Raichur). In Mysore, this percentage was less among unemployed and students (19.0) compared to employed (28.5) and housewives (30.4). In Raichur also, housewives had the highest percentage (30.8) followed by unemployed and students (18.5) and employed (16.0). Those taking three or more actions were not influenced by sex.

4.6 Interval between onset of symptoms and each action

4.6.1 ***Interval between onset of symptoms and first action :*** Percentages taking action within 1-7 and 8-15 days from onset of symptoms were more in Mysore (Table 57). Thus, within 15 days of onset, 75.8% had taken action in Mysore compared to 67.3% in Raichur. Though this difference became less for later intervals, the cumulative percentages were consistently higher in Mysore and **indicates slightly earlier first actions by Mysore CS**. (See Fig.6 also)

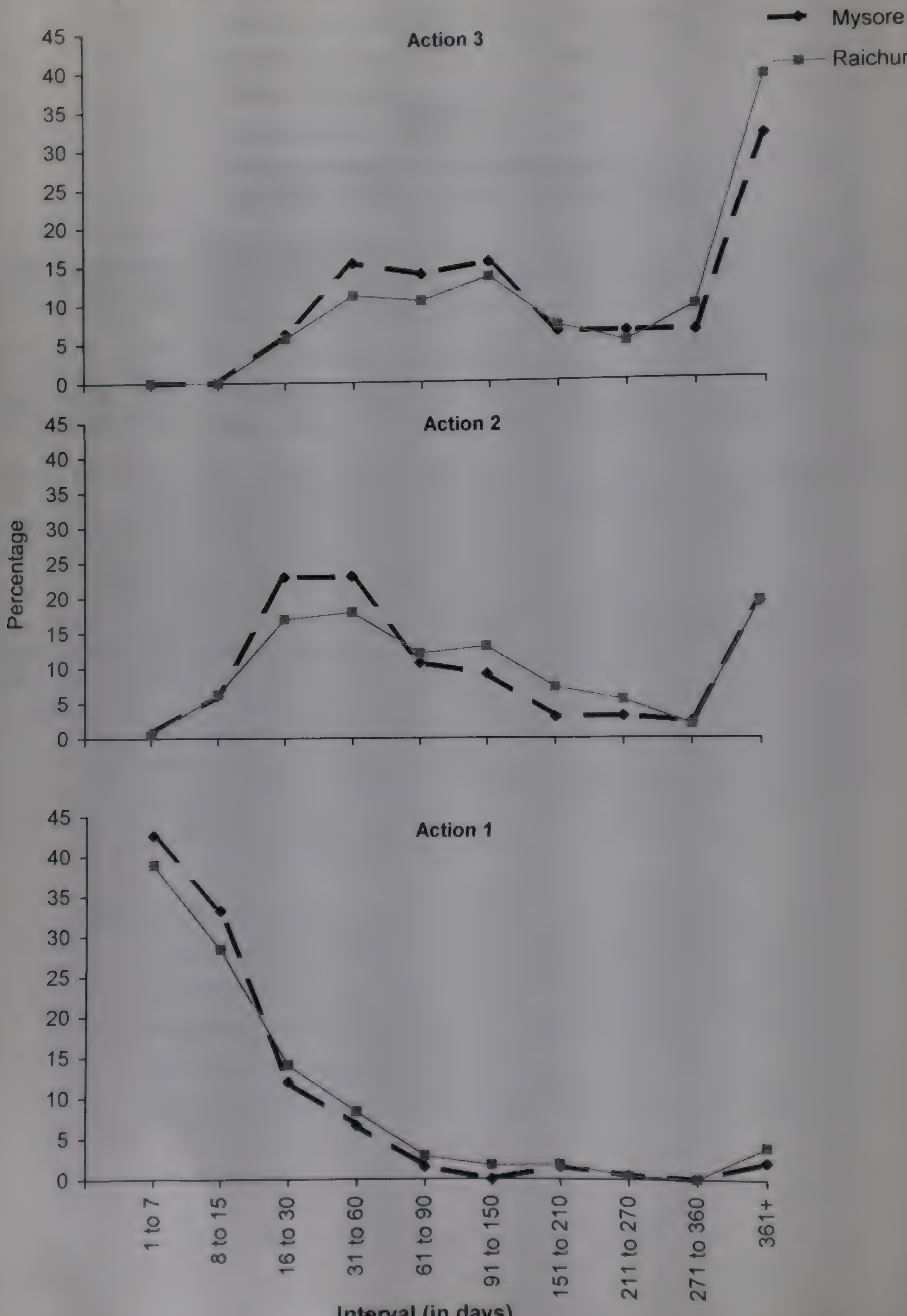
4.6.2 ***Interval between onset of symptoms and second action :*** Table 57 shows that the **cumulative percentages for action taken after different intervals from onset of symptoms were consistently higher in Mysore for second action also.** The differences were larger for intervals of 31-60 and 61-90 days. The relevant figures were : 52.7% and 63.4% respectively for Mysore and 41.5% and 53.3% respectively for Raichur.

Table-57

Interval between onset of symptoms and different actions in Mysore and Raichur Districts

Action No., District	Interval for action (days)									
	1-7	8-15	16-30	31-60	61-90	91-150	51-21	11-27	71-36	361+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Action 1-Per -Mysor	42.6	33.2	11.9	6.6	1.5	0.0	1.5	0.5	0.0	2.1
-Raich	38.9	28.4	14.0	8.3	2.8	1.7	1.8	0.4	0.0	3.9
Cum -Mysor	*42.6*	*75.8*	*87.7*	*94.3*	*95.8*	*95.8*	*97.3*	*97.8*	*97.8*	*100.0*
-Raich	*38.9*	*67.3*	*81.3*	*89.6*	*92.4*	*94.1*	*95.9*	*96.3*	*96.3*	*100.0*
Action 2-Per -Mysor	0.7	6.1	22.9	23.0	10.7	9.1	3.0	3.1	2.3	19.1
-Raich	0.5	6.2	16.9	17.9	12.0	13.0	7.2	5.4	1.9	19.2
Cum -Mysor	*0.7*	*6.8*	*29.7*	*52.7*	*63.4*	*72.5*	*75.5*	*78.6*	*80.9*	*100.0*
-Raich	*0.5*	*6.7*	*23.6*	*41.5*	*53.5*	*66.5*	*73.7*	*79.1*	*81.0*	*100.0*
Action 3-Per -Mysor	0.0	0.0	6.2	15.3	13.8	15.3	6.3	6.2	6.1	30.8
-Raich	0.0	0.0	5.6	11.1	10.4	13.4	7.1	4.9	9.3	38.3
Cum -Mysor	*0.0*	*0.0*	*6.2*	*21.5*	*35.3*	*50.6*	*56.9*	*63.1*	*69.2*	*100.0*
-Raich	*0.0*	*0.0*	*5.6*	*16.7*	*27.1*	*40.5*	*47.6*	*52.5*	*61.8*	*100.0*

Fig 6 : Interval between onset of Symptoms and each action in Mysore & Raichur Districts



4.6.3 ***Interval between onset of symptoms and third action :*** **Cumulative percentages were again consistently higher in Mysore compared to Raichur for third action at different intervals** (Table 57). The difference was highest for interval of 91-150 days; (50.6%) for Mysore and 40.5% for Raichur.

4.7 Health facilities contacted

4.7.1 ***Health facilities contacted for first action :*** **CS consulting PMP for first action was much higher in Raichur (85.6%) compared to Mysore (52.6%) (Table 58).** On the other hand, **hardly anyone visited PHC in Raichur (1.2% only) compared to 24.9% in Mysore. But this latter percentage shows that PHCs were not popular in Mysore also.** GH was utilised more often by Mysore CS (17.2%) as against 9.1% by Raichur CS.

4.7.2 ***Health facilities contacted for second action :*** Table 58 shows that **PMP was more popular for second action also in Raichur** (76.7%) compared to Mysore (48.9%) and PHC was less popular. While **popularity of PHC** remained at the same level of 1.5% for second action also in Raichur, that in **Mysore came down to as low as 10.8%.** GH was more popular in Mysore for second action also (19.9%) compared to Raichur (12.0).

4.7.3 ***Health facilities contacted for third action :*** **For third action also the pattern was the same with PMP being more popular in Raichur and PHC in Mysore even though the popularity of the latter was as low as 13.7%** (Table 58). Differences in utilisation of GH narrowed down.

4.7.4 ***Factors influencing contacts with HFs :***

(a) ***Single contacts with HFs :*** **Among Raichur CS, percentage making single contacts with HFs increased steadily with age from 29.9 to 46.3 (Fig.7).** This was because of the same trend for

Table - 58

Distribution of CS by type of health facility contacted for each action in Mysore and Raichur Districts

Health Facility	Action-1		Action-2		Action-3	
	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur
(1)	(2)	(3)	(4)	(5)	(6)	(7)
PMP	52.6	85.6	48.9	76.7	36.8	59.6
PHC	24.9	1.2	10.8	1.5	13.7	4.1
GH	17.2	9.1	19.9	12.0	15.4	12.7
NGH	3.9	1.4	7.6	5.8	10.8	12.6
DTC	0.0	0.0	1.5	2.2	0.0	4.1
Sanatorium	0.4	0.7	11.4	2.0	23.2	7.0
Others	0.9	2.1	0.0	0.0	0.0	0.0

Fig 7 : Influence of Age and Highest Education Level in the HH on single contacts with HFS in Mysore and Raichur Districts

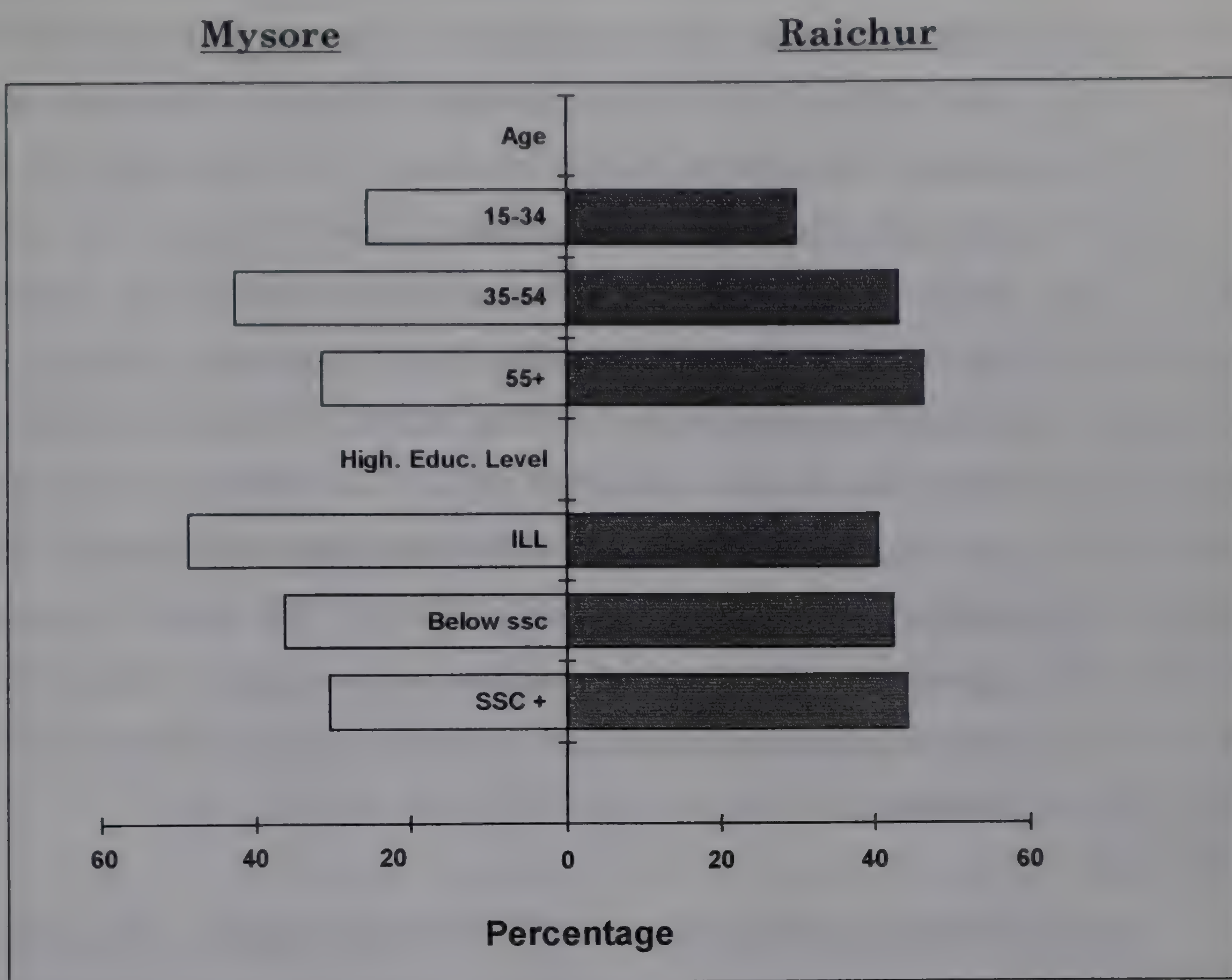
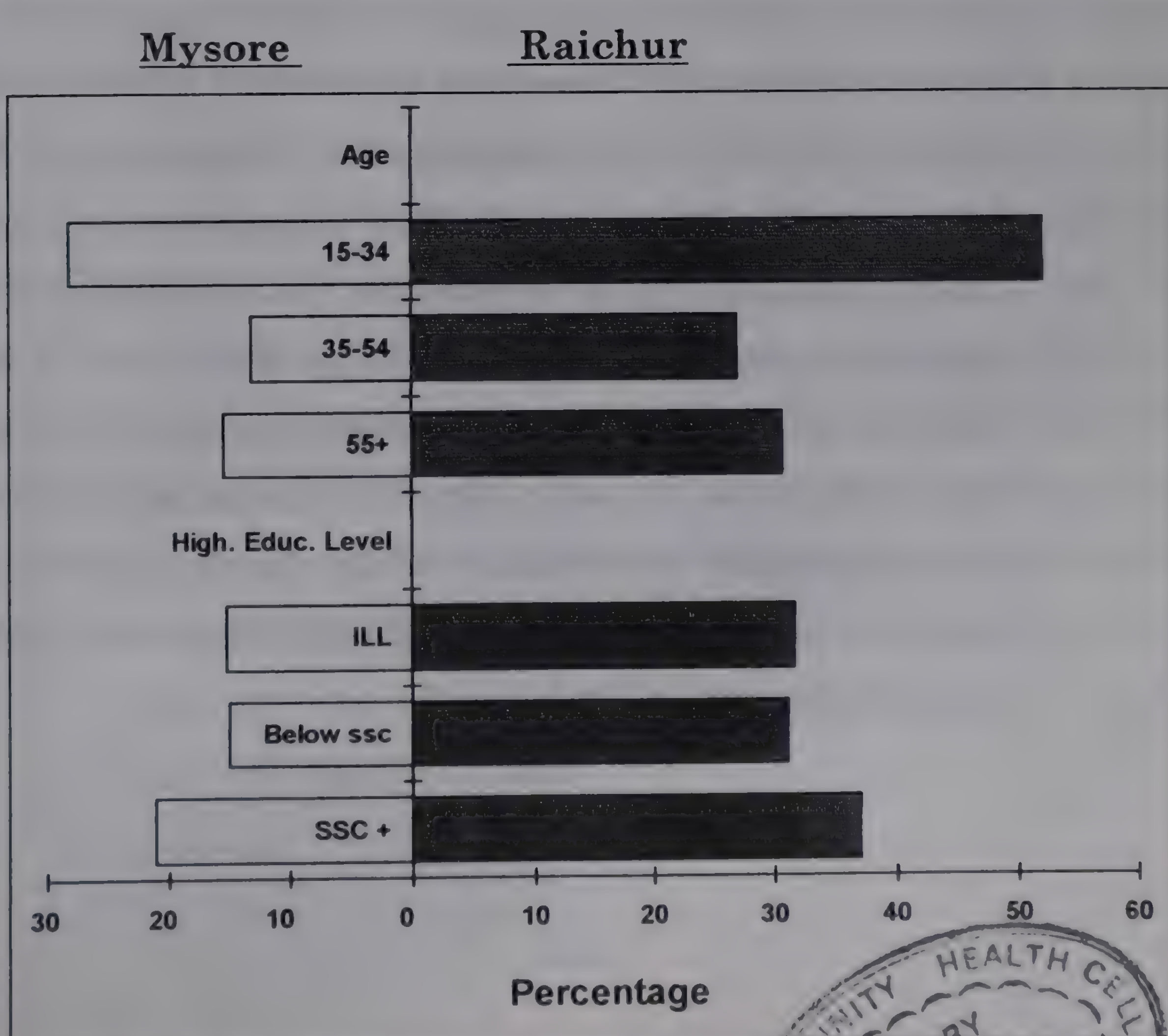


Fig 8 : Influence of Age and Highest Educational Level in the HH on multiple contacts with same type of HF in Mysore & Raichur Dist.



PMP (the most popular HF) from 29.9 to 39.3 and GH from 0.0 to 6.7. **It decreased steadily from 48.9 to 30.4 with increase in highest educational level in HH.** It was 41.2 among females and 34.6 among males. Single contacts with all HFs together was less among housewives (28.6) compared to employed (44.7) and unemployed and students (46.7). Pattern was the same for contacts with PMP (27.2 for housewives which was smaller than 38.8 and 39.6 for the other two occupation groups). This percentage was higher among SC/ST (44.2) compared to BCs (35.0) for all HFs. For PMP the corresponding percentages were 39.5 and 31.8 respectively and showed the same pattern. The **only difference observed among Mysore CS was in percentage contacting PMP being higher in families of size 1-6** (21.1) compared to families of size 7+ (14.7). Type of family had no such influence.

(b) ***Multiple contacts with HFs :*** Among **Mysore CS, percentage having multiple contacts with PMP decreased steadily with increase in age from 20.6 to 3.50.** Among Raichur CS, this percentage was higher in age group 15-34 (52.0) compared to 26.9 in 35-54 and 40.6 in 55+ age group. **Multiple contacts** with PMP as well as other HFs **were less for females (26.3%) compared to males (38.6%) among Raichur CS.** Percentage of Mysore CS having multiple contacts with all HFs together was higher among SC/ST (25.0) compared to BCs (16.1). Pattern was the same for multiple contacts with PHC (15.5 for SC/ST and 5.6 for BCs). Highest education level in HH, occupation, type of family and family size did not have any such influence. Percentages making multiple contacts with the same type of HF (for all HFs together) in different groups of Mysore and Raichur CS according to age and education level are depicted in Fig.8.

(c) ***Multiple contacts with GHFs and SHFs :*** Percentage having multiple contacts (combinations) with GHFs and SHFs was higher in age group 55+ (53.2) compared to 46.2 in 15-34 and 44.2 in 35-54, among Mysore CS. Among Raichur CS, it was highest in 35-54 (30.2) and least in 15-34 (18.2) with 55+ in between (23.0). It was more among females (30.1) (Fig.9) and unemployed and students (20.8). Among Mysore CS, it was less for family size 1-6 (44.9) compared to family size 7+ (51.7). This percentage was less among SC/ST compared to BCs in both districts. The relevant figures were : 39.6% for SC/ST compared to 50.0% for BCs among Mysore CS and 19.5% for SC/ST compared to 33.3% for BCs among Raichur CS. The two districts had opposite patterns with regard to influence of highest education level in HH. While, among Raichur CS, SSC+ has lesser frequency for such contacts (18.8%) compared to 27.9% for illiterates and 26.5% for below SSC, illiterates among Mysore CS had less frequency (35.9%) compared to below SSC (48.7%) and SSC+ (48.4%). Type of family had no such influence.

(d) ***Contacts with GHFs only :*** **Percentage of CS having contacts with GHFs only (either alone or in combination with others) increased with age from 68.7 to 89.0, among Mysore CS** (Fig.10). **Among Raichur CS, it increased steadily with increase in highest education level in HH from 76.0 to 87.1.** It was higher among SSC+ (100.0) compared to illiterates (92.1) and below SSC (92.9). The two districts had opposite patterns with regard to influence of sex. While this percentage was less for females (76.8) compared to males (83.4) among Mysore CS, it was higher for females (100.0) compared to males (90.7) among Raichur CS. Employed Raichur CS had less frequency for such contacts (90.7) compared to housewives (100.0%) and unemployed and students (98.2%). Type of family, family size and religion and caste did not have any such influence.

Fig 9 : Influence of Sex and Highest Educational Level in the HH on Multiple contacts with combination of GHFS and SHFS in Mysore & Raichur Dist.

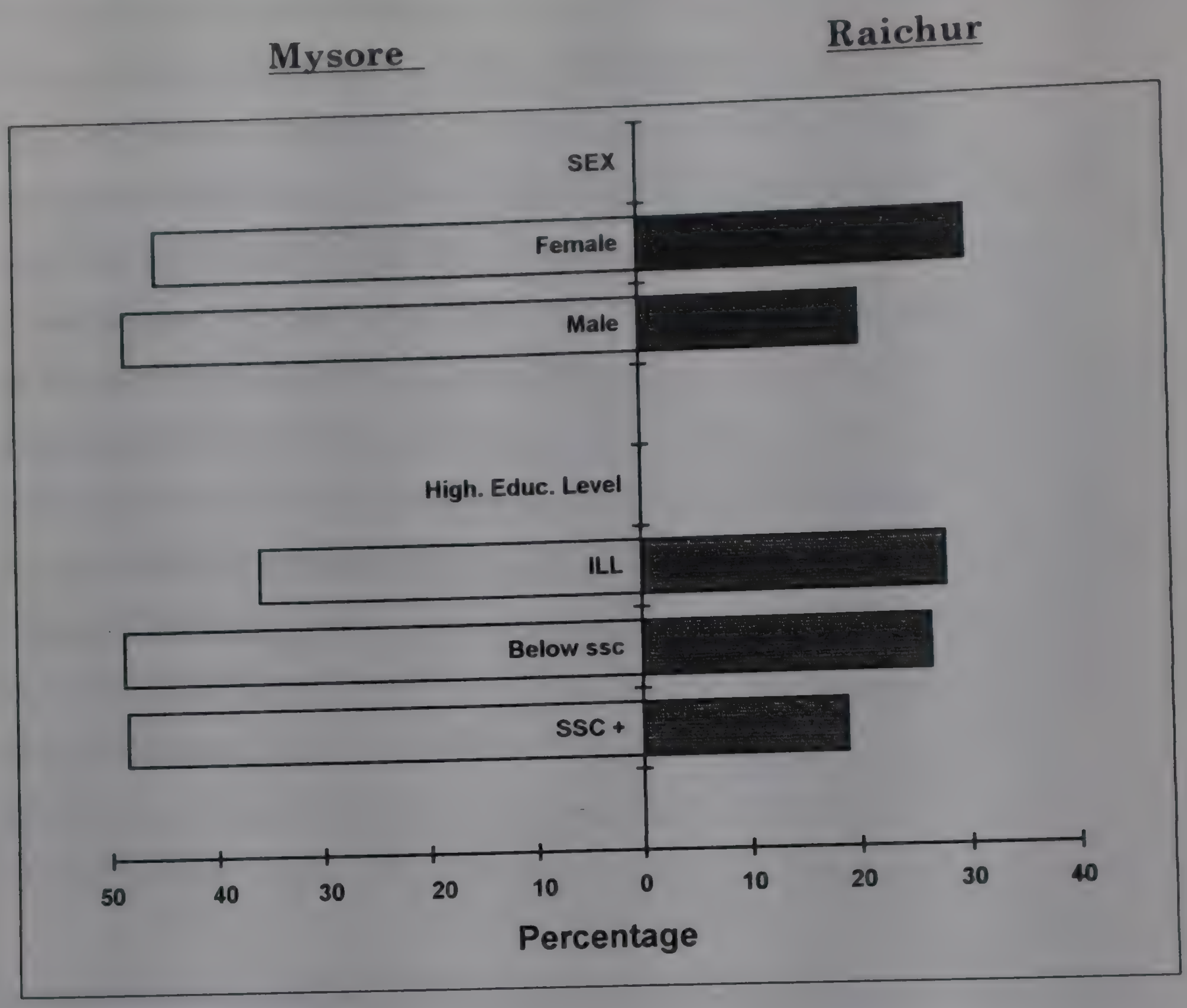


Fig 10 : Influence of Age, Sex and Highest Educational Level in the HH on contact with GHFs only in Mysore and Raichur Districts

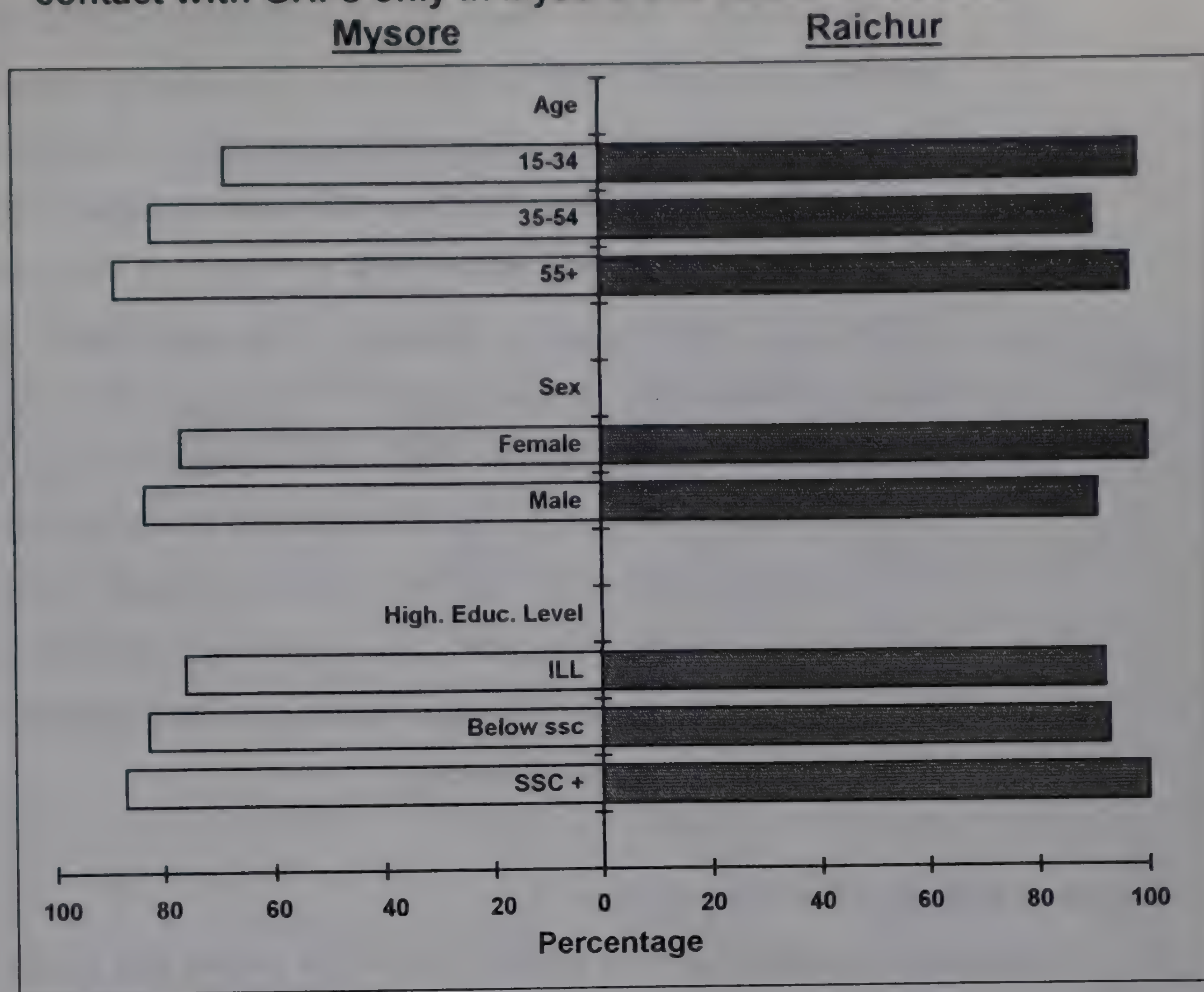
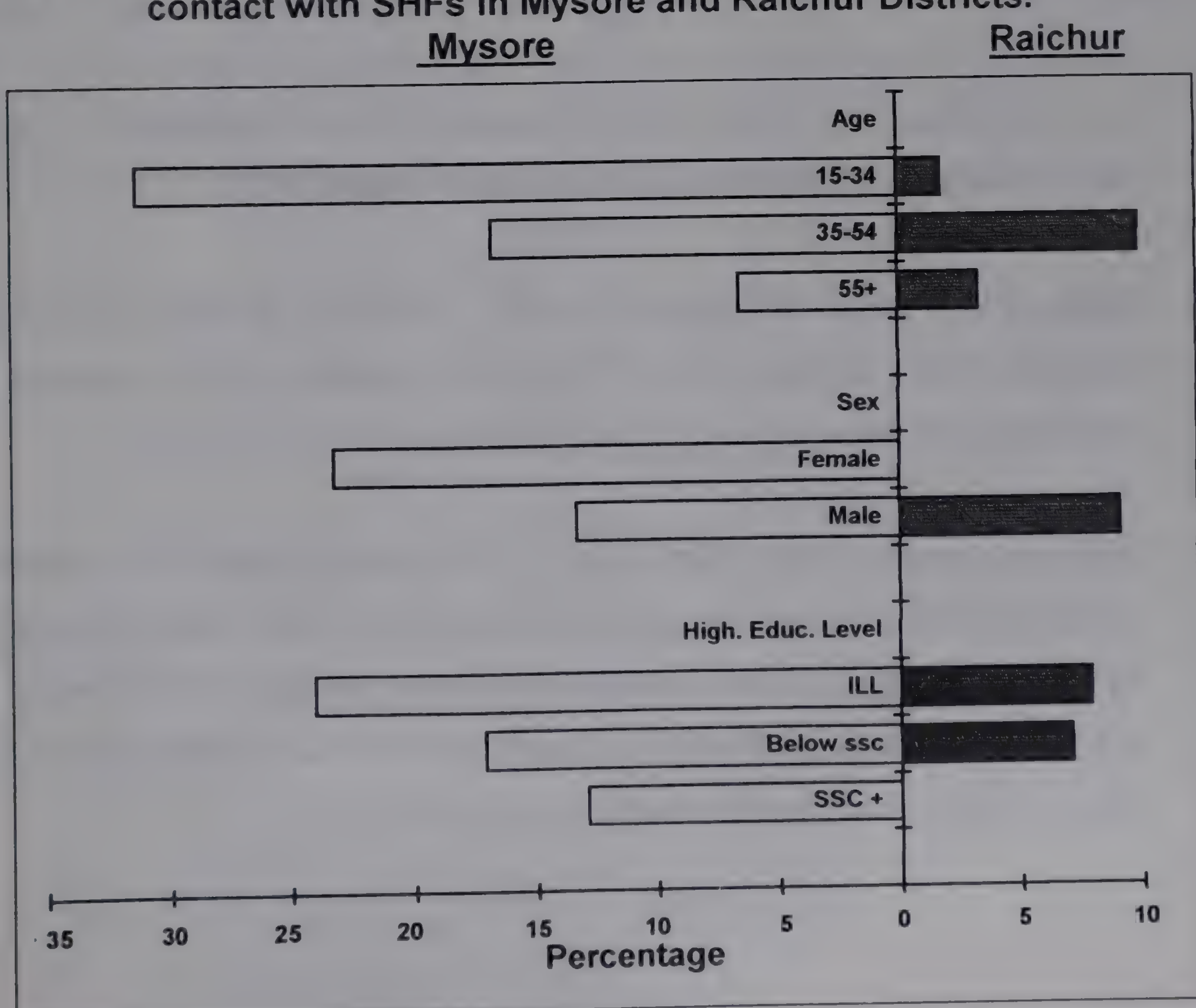


Fig 11 : Influence of Age,Sex and Highest Educational level in the HH on contact with SHFs in Mysore and Raichur Districts.



(e) *Contacts with SHFs:* **Percentage making contacts with SHFs (mostly along with GHFs) showed a decreasing trend with age from 31.3 to 6.5 among Mysore CS** (Fig.11). **A decreasing trend was observed among Raichur CS with increase in highest education level in HH from 24.0 to 12.9.** It was less among SSC+ (0.0) compared to illiterates (7.9) and below SSC (7.1) among Mysore CS. It was higher for employed (9.3) compared to unemployed and students (1.8) and housewives (0.0) among Raichur CS. It was more for females (23.2) compared to males (13.3) among Mysore CS and less among females (0.0) compared to males (9.1) among Raichur CS and showed opposite patterns for the two districts. Type of family, family size and religion and caste did not have any such influence.

4.8 Distance travelled for each action

4.8.1 ***Distance travelled for first action :*** Table 59 shows that **50.8% of CS in Raichur travelled less than 1 km to take first action compared to 8.3% only in Mysore.** Larger percentages of Mysore CS travelled both 1-5 km and 6-10 kms (59.1% and 14.6% respectively) as against 36.0% and 8.6% respectively by Raichur CS. Even then, 17.9% of Mysore CS had to travel more than 10 km compared to 4.4% by Raichur CS.

4.8.2 ***Distance travelled for second action :*** Distance travelled for second action showed a similar pattern of difference between the two districts but the differences were higher for distances beyond 6 km (Fig.12).

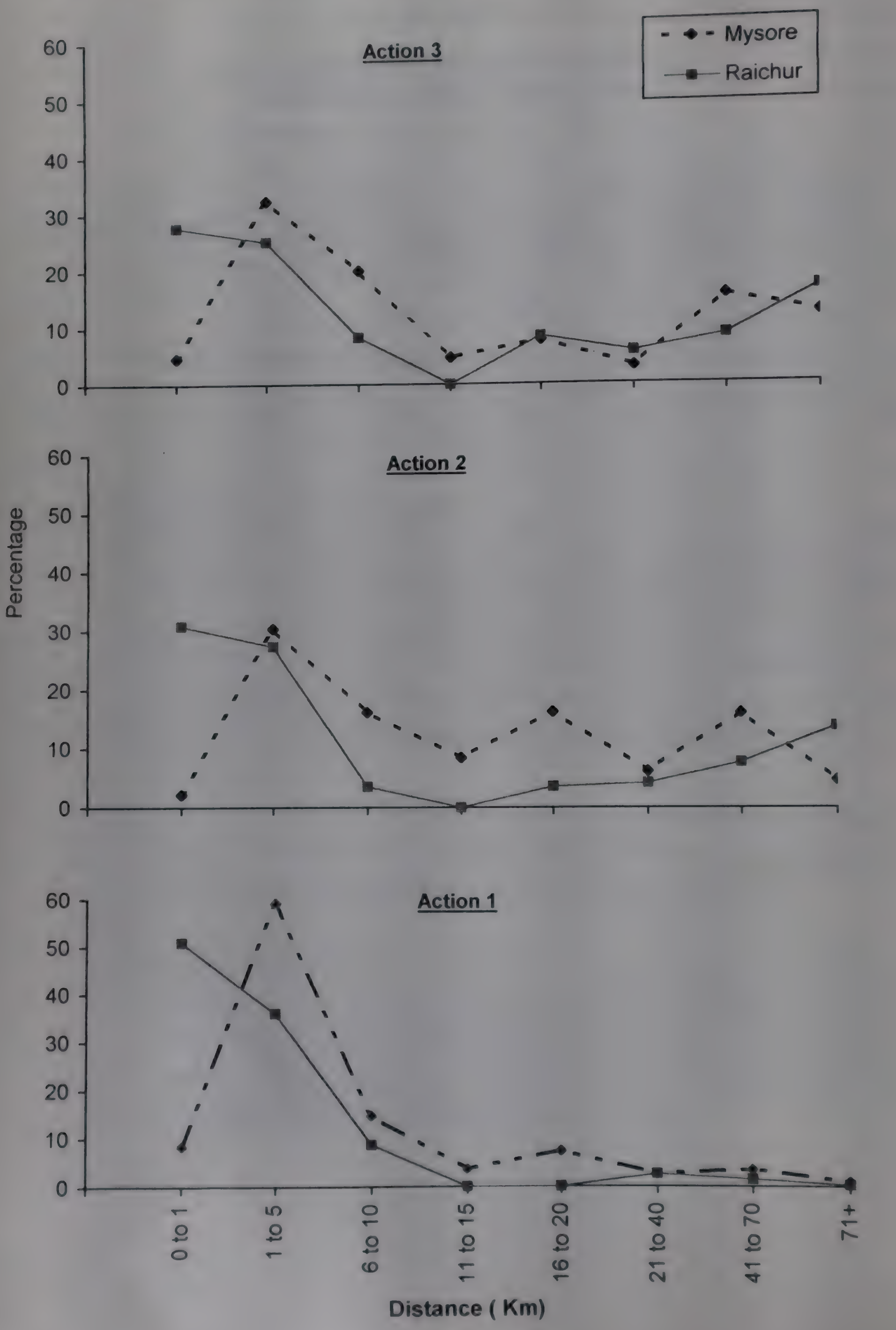
4.8.3 ***Distance travelled for third action :*** The same pattern of difference between the two districts for distance travelled for third action is shown in Table 59 and Fig.12. While consistently larger proportions of Mysore CS had travelled distances from 1 to 70 km compared to Raichur CS for both first and second action, this was not so for third action.

Table - 59

Distribution of Cs by distance travelled for each action in Mysore and Raichur Districts

Distance (Kms.)	Action-1		Action-2		Action-3	
	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<1	8.3	50.8	2.2	30.8	4.7	27.7
1-5	59.1	36.0	30.4	27.3	32.4	25.2
6-10	14.6	8.6	16.1	3.5	20.0	8.3
11-15	3.6	0.0	8.4	0.0	4.7	0.0
16-20	7.3	0.0	16.2	3.5	7.6	8.3
21-40	2.6	2.6	6.1	4.1	3.0	5.6
41-70	3.5	1.5	16.0	7.6	15.3	8.4
71+	0.9	0.3	4.6	13.7	12.2	16.6

Fig 12 : Distance Travelled by CS for each Action in Mysore and Raichur Districts



4.9 Symptoms present at each action

4.9.1 ***Symptoms present at first action :*** Proportion with cough alone at the time of first action was higher among Mysore CS (30.4%) compared to 23.2% among Raichur CS (Table 60). Cough and one more symptom was more common among Raichur CS (42.4%) than among Mysore CS (37.1%).

4.9.2. ***Symptoms present at second action :*** In both districts, about 20% had only cough at the time of second action (Table 60). But cough and one more symptom and cough and two more symptoms were more common among Raichur CS (35.0% and 21.5% respectively) than Mysore CS (26.8% and 14.9% respectively).

4.9.2 ***Symptoms present at third action :*** Table 60 shows that at the time of third action, the two districts differed with regard to percentages with cough alone, cough and one more symptom and cough and two more symptoms. While the first two symptoms had higher proportion among Raichur CS, the last symptom was more common among Mysore CS.

4.10 Reason for choosing HF for each action

4.10.1 ***Reason for choosing HF for first action :*** **Advice of family and friends was more common among Mysore CS (35.5%) than among Raichur CS (16.6%)** (Table 61). Those giving convenience as the reason were more common among Raichur CS (67.7% compared to 61.5% among Raichur CS). (See Fig.13 also)

4.10.2 ***Reason for choosing HF for second action :*** Proportion giving advice of family and friends as the reason was more among Mysore CS for second action also but the difference became smaller due to increased proportion giving this reason among Raichur CS compared to first action (Table 61). **Expectation of better service was much more among Raichur (53.0%) compared to that among Mysore CS** (38.2%). Proportion stating

Table - 60

Distribution of CS by symptoms present at each action in Mysore and Raichur Districts

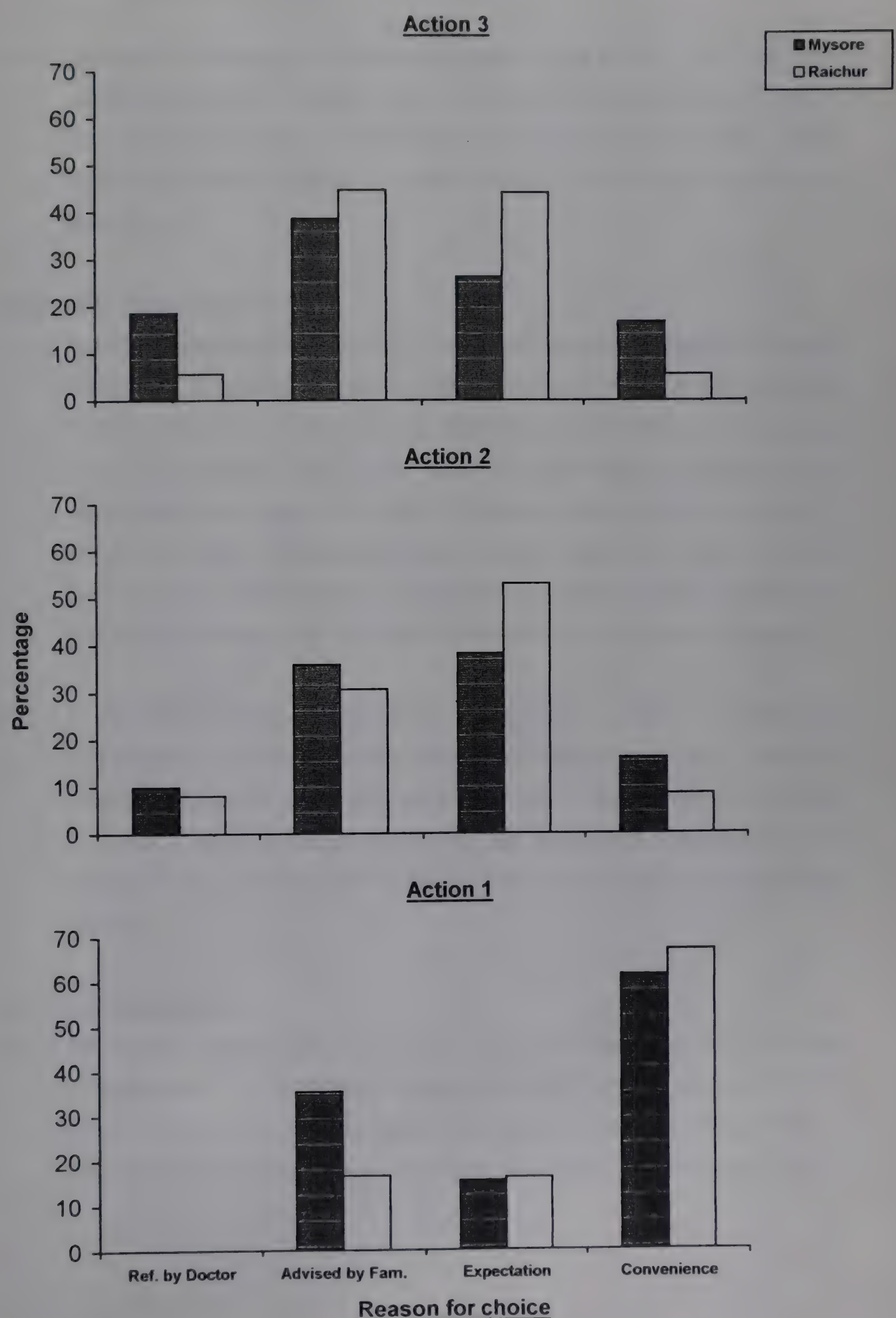
Symptoms	Action-1		Action-2		Action-3	
	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Cough with blood in sputu	8.6	6.5	15.2	10.4	20.1	20.9
2. Without blood in sputum:						
a) Cough alone	30.4	23.2	20.6	19.3	15.4	24.9
b) Cough 1 more symptom	37.1	42.4	26.8	35.0	24.4	31.8
c) Cough 2 more symptom	17.7	17.8	14.9	21.5	15.3	5.7
d) Cough 3 more symptom	3.9	8.1	12.2	7.8	12.4	11.1
e) Cough 4 more symptom	2.4	2.1	7.6	5.8	12.4	5.6

Table - 61

Distribution of CS by reason for choosing the health facility visited for each action in Mysore and Raichur Districts

Reason	Action-1		Action-2		Action-3	
	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Referred by doctor	0.0	0.0	9.9	8.0	18.5	5.6
Advised by family, friends	35.5	16.6	35.9	30.6	38.6	44.7
Expectation of better service	15.5	16.2	38.2	53.0	26.2	44.2
Convenience	61.5	67.2	16.0	8.4	16.8	5.6

Fig 13 : Reasons for Choice for each action by C.S. in Mysore & Raichur Districts



convenience was higher among Mysore CS for second action compared to Raichur CS. **This proportion showed a steep decline from first to second action**. (Fig.13).

4.10.3 ***Reason for choosing HF for third action*** Table 61 and Fig.13 show that expectation of better service was much more among Raichur CS (44.2%) than among Mysore CS (26.2%), for choosing HF for third action. Percentage stating referred by doctor and convenience were more among Mysore CS.

4.11 Diagnostic Examinations

4.11.1 ***Sputum Examination :*** During a larger percentage of actions by Mysore CS sputum examination was ordered compared to Raichur CS (Table 62). While this was so at the time of each action, the difference was much more for second and third action. Percentage ordering sputum examination was higher for PMP in Mysore and for GH in Raichur. A higher proportion of those examined were told about the result in Raichur than in Mysore. While sputum positives out of those examined were more in Raichur, positives out of results told were somewhat more in Mysore.

4.11.2 ***X-ray Examination :*** Percentage of actions by CS for which X-ray examination was ordered was somewhat higher in Mysore (Table 62). While there was no such difference for action 1, the difference was more for action 2 than for action 3. Raichur was better with regard to informing results of x-ray examination. Positivity rates did not differ between the two districts.

4.12 TB cases diagnosed

4.12.1 ***TB Cases among CS :*** In all, 60 CS have been told that they were suffering from TB, 35 among Mysore CS and 25 among Raichur CS. This gives a case yield (i.e. TB cases as percentage of CS taking action) of 17.3 in Mysore and 15.2 in Raichur. The slightly higher case yield in

Table - 62

Details of sputum and X-Ray examination of CS in Mysore and Raichur Districts

Examination during / by	Sputum		X-Ray	
	Mysore	Raichur	Mysore	Raichur
(1)	(2)	(3)	(6)	(7)
1. % ordered of CS:	*26.7*	*18.2*	*27.7*	*21.7*
During:				
Action 1	17.2	12.7	13.1	15.3
Action 2	39.7	23.0	42.0	27.2
Action 3	41.8	25.2	40.2	30.7
By:				
PMP	17.0	11.8	17.5	14.0
PHC	NC	NC	NC	NC
GH	40.3	47.0	40.9	NC
NGH	NC	NC	NC	NC
DTC	NC	NC	NC	NC
Sanatorium	NC	NC	NC	NC
2. Result told of examined	60.1	75.7	58.9	73.2
3. % Positive of examined	*31.9*	*37.1*	*34.4*	*37.0*
4. % positive of result told	*53.0*	*49.9*	*57.8*	*52.0*

Mysore was due to the female CS in Mysore having a higher case yield (20.8) compared to Raichur (11.8). There was no such difference in case yield among male CS in the two districts.

4.12.2 ***How and when diagnosed as TB :*** **Out of the 35 TB cases in Mysore 37.2% were diagnosed during first action and 51.4% during second action. In Raichur a larger proportion (60.0%) was diagnosed during first action and only 16.0% during second action.** In Mysore 31.4% were diagnosed within 15 days from onset of symptoms, 22.7% within 16-30 days 20.2% within 30-60 days and 8.6% within 61-90 days. Only 2.9% were diagnosed after an interval of 361 days. The situation was quite different in Raichur. Eventhough 40.0% (higher than in Mysore) were diagnosed within 15 days, 24% were diagnosed only after an interval of 361+ days. Only 8.0% were diagnosed within 16-30 days and 4.0% within 31-60 days (compared to 22.7% and 20.2% respectively in Mysore). **In Mysore, 54.3% were diagnosed by PMP and 31.4% by sanatorium. While PMP diagnosed 68% of cases in Raichur, GH diagnosed 16% and NGH and sanatorium 8% each.**

4.13 Cost

4.13.1 Direct, indirect and total costs : Percentage distribution of total cost did not differ much between the two districts except that frequency in cost range of Rs.200-599 was more among Raichur CS (29.4%) compared to 20.4% among Mysore CS (Table 63). This was mainly due to a higher proportion of Raichur CS incurring direct cost of Rs.200-599 (33.5%) as against 23.0% by Mysore CS. A somewhat higher proportion of Mysore CS (11.9%) had incurred direct cost of Rs.100-199 compared to Raichur CS (6.7%). Distribution of indirect cost also showed two differences between the two districts viz., (1) proportion not incurring any indirect cost was higher among Raichur CS (68.9%) compared to 55.4% among Mysore CS and (2) proportion incurring indirect cost at Rs.1-99 was less among Raichur CS (4.4%) compared to 11.1% among Mysore CS.

TABLE-63

Distribution of CS by direct, indirect and total cost incurred in Mysore and Raichur Districts

Cost Range (Rs.)	Direct Cost		Indirect Cost		Total Cost	
	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Nil	0.4	1.2	55.4	68.9	0.0	0.8
001-099	6.1	5.4	11.1	4.4	5.1	2.9
100-199	11.9	6.7	4.8	3.6	11.5	6.7
200-599	23.0	33.5	10.2	12.0	20.4	29.4
600-999	19.9	20.4	3.9	4.4	16.8	19.7
1000-1999	22.3	19.1	4.9	4.2	22.7	23.4
2000-3999	10.9	10.4	5.9	1.7	11.3	12.7
4000+	5.3	3.2	3.9	0.7	12.1	4.3

4.13.2 *Factors influencing total cost : Average* **cost incurred by Raichur CS was higher among males (Rs.1,000) compared to females (Rs.600). It decreased steadily with age from Rs.1,500 to Rs.600 among Mysore CS.** Percentage of Mysore CS spending Rs.1-199 increased with age from 9.4 to 23.3. Average cost among Mysore CS was less in joint families (Rs.600) compared to nuclear families (Rs.1,000). **Percentages spending Rs.200-599 decreased with increase in number of earning members in HH from 26.0 to 16.9 among Mysore CS and from 34.6 to 26.7 among Raichur CS. Percentage spending Rs.3,000+ decreased among Mysore CS from 20.6 to 12.8 with increase in earning members.** Among Mysore CS, with increase in higher education level in HH, percentage spending Rs.200-599 increased from 13.9 to 26.7 and those spending Rs.600-999 decreased from 27.1 to 12.0. Percentage spending Rs.1-199 was more among unemployed and students (40.6) compared to employed (20.7) with housewives in between (14.2). Among Raichur CS, percentage spending Rs.1-199 was higher for unemployed and students (19.3) compared to employed (7.4) and housewives (6.3). Among Mysore CS, average cost was lower for unemployed and students (Rs.600) compared to housewives (Rs.900) and employed (Rs.1,000). **Percentage spending Rs.1-199 and Rs.200-599 steadily decreased with increase in duration of cough from 43.7 to 5.8 for the former and from 28.3 to 10.6 for the latter. On the other hand, those spending Rs.1,000-2,999 and Rs.3,000+ showed an increasing trend with increase in duration from 4.1% to 42.7% for the former and from 4.1% to 29.0% for the latter.** Among Raichur CS, also, those spending Rs.200-599 and Rs.1,000-2,999 showed opposite trends, as for Mysore CS, the corresponding figures being : decrease from 57.4% to 11.6% for the former and increase from 18.1% to 39.3% for the latter, except for a drop from 39.3% for 27-52 weeks to 36.9% for 53+ weeks. Average cost for different durations of cough among Mysore CS increased steadily from Rs.300 to Rs.2,000. While percentage spending Rs.200-599 was lower for family size 1-6 (17.2) compared to 26.3 for family size 7+, those spending

Rs.600-699 was more (20.7%) in family size 1-6 as against 9.8% for family size 7+. Percentage spending Rs.1-199 was highest for SC/ST (21.0) and lowest for Other Hindus (10.3) with BCs in between (16.1). Those spending Rs.200-599 was less among Other Hindus (6.7%) compared to SC/ST (22.3%) and BCs (20.9%), those spending Rs.600-999 was highest for Other Hindus (31.3%) followed by BCs (18.5%) and SC/ST (9.7%) and those spending Rs.1,000-2,999 were more for Other Hindus (41.7%) compared to SC/ST (30.2%) and BCs (29.0%). Such differences were observed among Raichur CS also. Those spending Rs.1-199 were highest for SC/ST (15.1%) followed by BCs (8.0%) and Other Hindus (0.0%), those spending Rs.600-999 were also highest for SC/ST (25.0%) followed by BCs (17.5%) and Other Hindus (10.8%), those spending Rs.1,000-2,999 were more for Other Hindus (52.7%) compared to SC/ST (27.5%) and BCs (28.6%) and those spending Rs.3,000+ were less for SC/ST (5.5%) compared to BCs (12.7%) and Other Hindus (15.0%). Average cost among Raichur CS was more for Other Hindus (Rs.1,500) compared to BCs (Rs.800) and SC/ST (Rs.700).

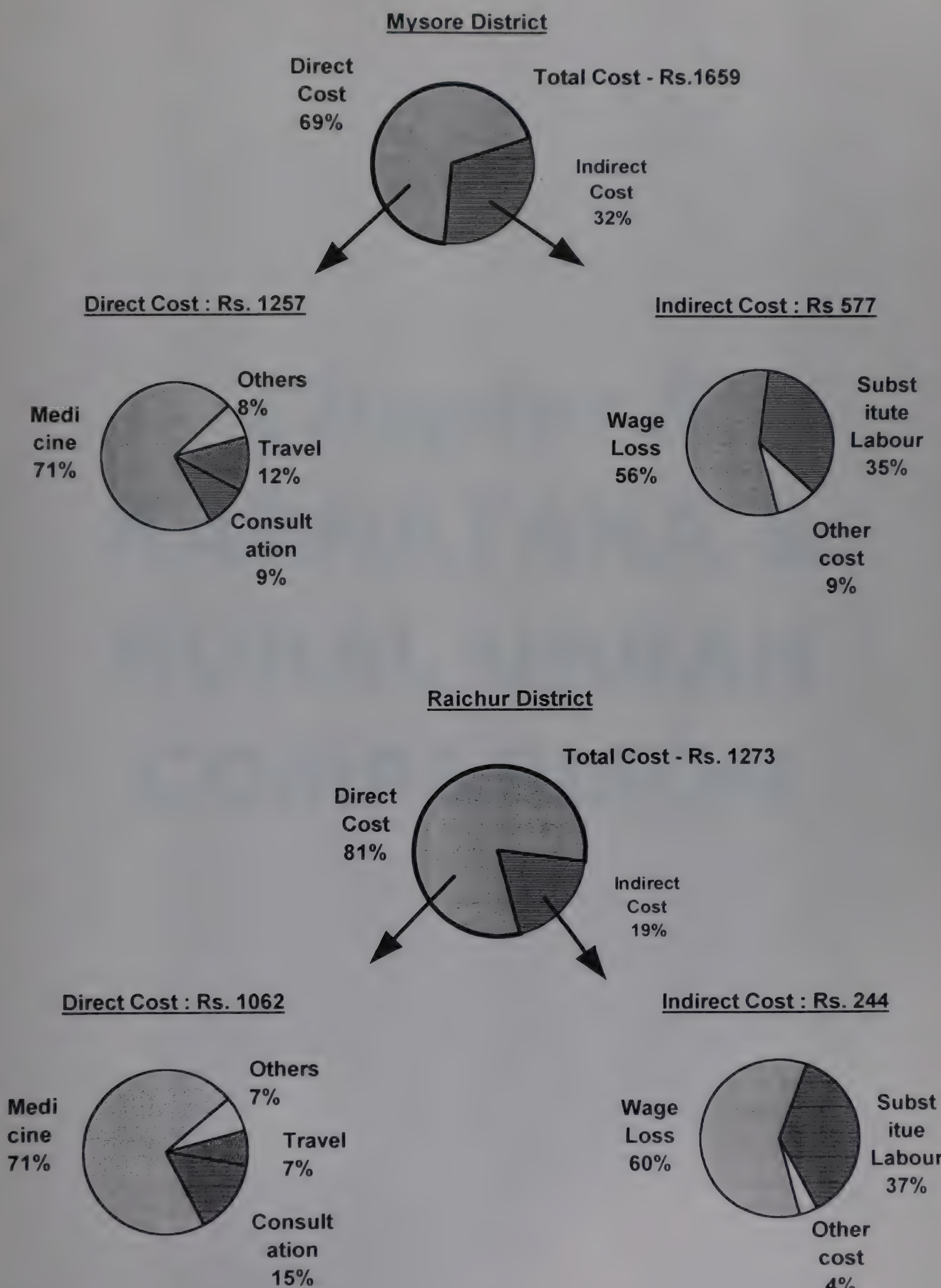
4.13.3 ***Cost under different cost heads :*** Average values of direct, indirect and total cost as well as average cost for different cost heads under direct and indirect costs for each action and for all actions together are given in Table 64. Average direct cost formed 75.8% of the total cost incurred by Mysore CS for all actions together (Fig.14). This proportion was still higher (83.4%) for Raichur CS. Such differences were observed for each action also. The major component of direct cost was cost of medicines which formed more than 70% of the direct cost for all actions together. This proportion did not differ much for different actions by Mysore and Raichur CS. While the second biggest component of direct cost was cost of consultation by Raichur CS, followed by travel cost, their positions were reversed for Mysore CS. Wage loss formed a higher proportion of indirect cost than cost of substitution of labour for all actions together by Mysore and Raichur CS, former being about 1.5 times higher than the latter.

Table 64

Mean cost under different cost heads for each action by CS in Mysore and Raichur Districts

Over heads	Cost (in Rs.) for action							
	Action 1		Action 2		Action 3		Allocations	
	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur	Mysore	Raichur
1. **Direct Cost**								
a) Travel	50	29	91	53	111	78	150	73
b) Consultation	64	101	49	82	64	67	115	154
c) Sputum Exam	3	2	5	NC	6	5	8	5
d) X-ray Exam	8	9	19	14	4	19	28	22
e) Medicine	414	497	470	346	592	358	893	761
f) Special Diet	0	0	0	0	0	4	2	NC
g) Tonics	14	12	22	8	37	4	44	19
h) Medicine Collection	0	0	NC	0	0	0	NC	0
i) Check-up Exam	0	0	NC	0	0	0	NC	0
Sub-total	**536**	**626**	**684**	**482**	**842**	**540**	**1,257**	**1,062**
2. **Indirect Cost**								
a) Wage Loss	61	49	63	42	79	55	89	68
b) Substitute Cost	32	32	41	33	52	18	56	42
c) Other costs	4	1	11	NC	1	3	14	4
Sub-total	**197**	**144**	**296**	**96**	**576**	**193**	**577**	**244**
3. **Total Cost**	**721**	**759**	**950**	**584**	**1,298**	**605**	**1,659**	**1,273**
No. of CS	201	169	131	92	65	38	201	169

Fig 14 : Cost Incurred under different Cost heads by CS in Mysore & Raichur District



Chapter 5

KARNATAKA & RURAL-URBAN COMPARISON

CHAPTER 5

KARNATAKA AND RURAL-URBAN COMPARISON

5.1 Prevalence of Sickness

5.1.1 ***Prevalence of Other Symptoms :*** Prevalence of symptoms other than cough (OS) in Karnataka for different population groups is shown in Table 65. **Prevalence rate for OS was 16.6% in Karnataka** (17.4% rural and 14.9% urban). It was slightly higher among females (18.8%) compared to males (14.5%). **It increased steadily with age from 12.1% to 25.8%.** The trend for males and females is shown in Fig.15. The rate was **highest in nuclear families (19.7%) and least in extended families** (12.5%) with joint families in between (14.7%). **With increase in family size, a decreasing trend was shown** (from 17.4% to 8.3%) except for a higher rate in families with 7-9 members. This exception was due to higher rate in rural areas. The **decline was faster in rural areas.** This rate appears to show a declining trend with increase in education level but there was hardly any difference between those below SSC and SSC+, which had less prevalence than illiterates. Rural-urban differences between all the other population groups were either small or negligible.

5.1.2 ***Prevalence of Cough :*** Prevalence rate for cough of any duration in all ages (CO) was 5.8% (Col. 9, Table 65). This was about one-third of the rate for OS. It was 5.4% among females and 6.1% among males. This rate also appears to have an increasing trend with age from the age of 15-34 and above, with age group of 55+ having a rate of 12.1%. The trend differed for males and females (Fig.15). As in the case of OS, this rate was also highest among nuclear families (6.2%) and least among extended families (4.2%). Again, the decreasing trend with increase in family size was observed, though differences were small (from 7.6% to 4.0%). With increase in education, this rate declined from 6.8% among illiterates to 3.4% among SSC+. Rural-urban differences were either small or negligible.

Table - 65

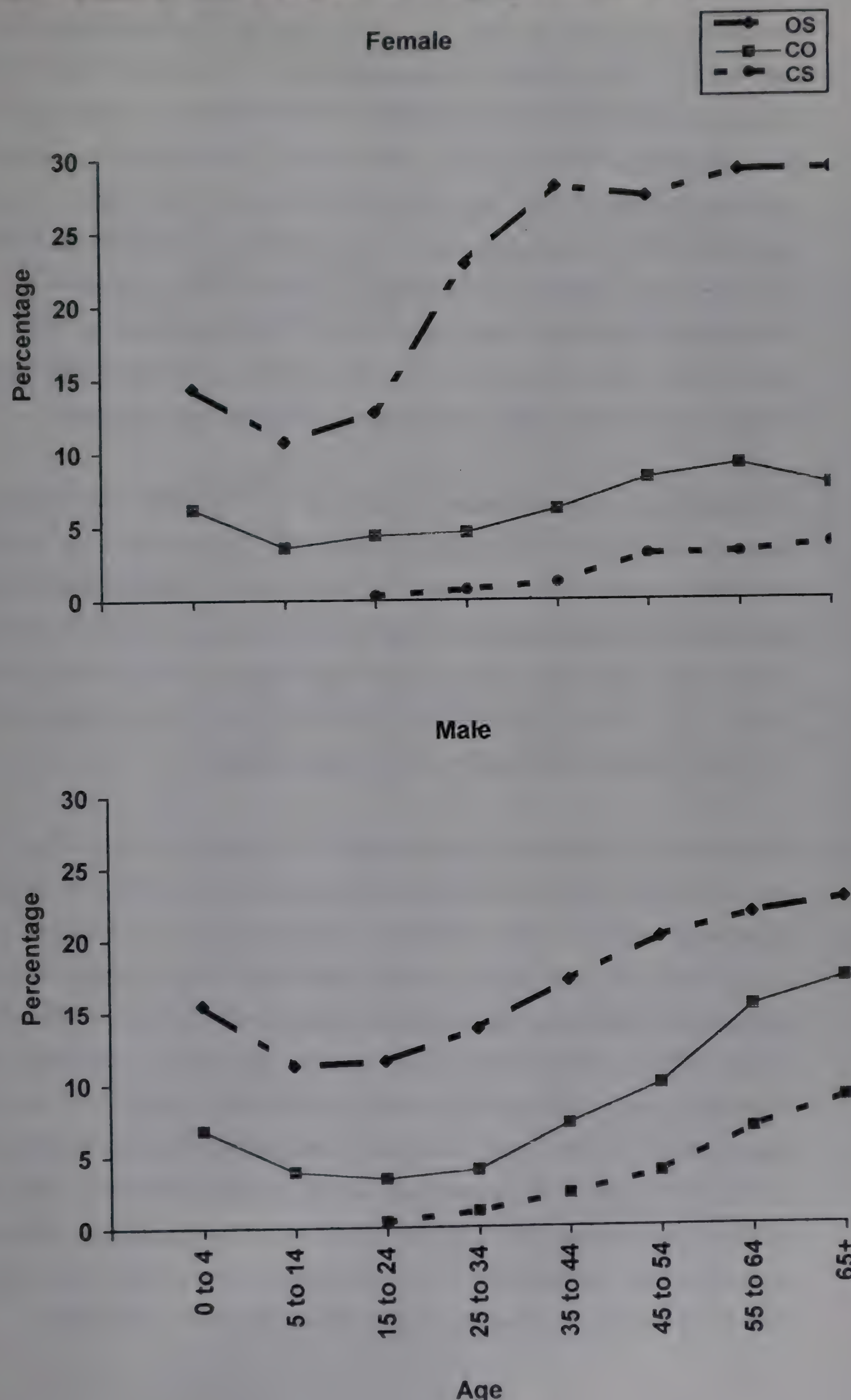
Prevalence Rate (PR) for Cough (CO) Other Symptoms (OS) and Chest Symptomatics (CS) in different population groups (Karnataka)

Population Groups	Population (all ages)		PR-OS (%)			PR-CO (%)			PR-CS (%)		
	Rural	Urban	R	U	T	R	U	T	R	U	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10	(11)	(12)
1. Total	**20209**	**20760**	**17.4**	**14.9**	**16.6**	**5.9**	**5.5**	**5.8**	**1.4**	**1.0**	**1.2**
2. Sex: Female	10088	10222	19.4	17.4	18.8	5.5	5.1	5.4	1.0	0.8	0.9
Male	10121	10538	15.4	12.4	14.5	6.2	5.9	6.1	1.7	1.2	1.6
3. Age: 0-14	6754	6980	12.3	11.7	12.1	4.1	5.5	4.5	-	-	-
15-34	7088	7547	16.3	12.3	15.1	4.2	3.8	4.1	0.6	0.6	0.6
35-54	4252	4330	23.9	20.4	22.8	8.2	6.5	7.7	2.6	2.1	2.5
55+	1936	1749	25.8	25.8	25.8	13.0	9.9	12.1	6.0	4.2	5.5
4. Type of family:											
Nuclear	8598	10166	20.8	17.2	19.7	6.2	6.3	6.2	1.1	0.9	1.0
Joint	9613	7316	15.2	13.5	14.7	5.8	5.5	5.7	1.7	1.4	1.6
Extended	1998	3278	13.2	10.8	12.5	4.6	3.2	4.2	0.6	0.3	0.5
5. Family size:											
1-3	1522	1887	19.7	12.2	17.4	7.6	7.7	7.6	2.0	1.2	1.7
4-6	9977	10445	13.0	10.5	12.2	6.0	6.2	6.1	1.3	1.0	1.2
7-9	5155	5004	15.9	10.4	14.2	6.1	4.8	5.7	1.6	1.0	1.4
10+	3555	3424	9.3	6.1	8.3	4.2	3.4	4.0	0.9	0.6	0.8
6. Educational Status:											
Illiterate	9191	7174	20.6	19.0	20.1	7.1	6.0	6.8	1.8	1.1	1.6
Below SSC	6027	7082	15.5	13.0	14.8	5.1	4.6	5.0	1.1	1.1	1.1
SSC+	1982	3670	14.9	12.0	14.0	3.2	3.8	3.4	1.9	1.3	1.7

R-Rural U-Urban T-Both rural and urban

PR for T are weighted

Fig 15 : Prevalence rate of OS, CO & CS By age and Sex in Karnataka



5.1.3 ***Prevalence of Chest Symptomatics :*** Prevalence rate for CS in Karnataka are shown in Cols. 10-12 of Table 65. This rate was 1.4% in rural areas, 1.0% in urban areas and 1.2% in Karnataka. It was 0.9% among females and 1.6% among males. An increasing trend with age was observed (from 0.6% in 15-34 to 5.5% in 55+). This rate also was least in extended families (0.5%), but, unlike for OS and CO, it was highest in joint families (1.6%). As in the case of OS, a decreasing trend (with exemption for family size 7-9) was indicated (from 1.7% to 0.8%). Prevalence rate was least for education level below SSC (1.1%) compared to 1.6% for illiterate and 1.7% for SSC+. As for OS and CO, rural-urban differences between all other population groups were either small or negligible.

5.1.4 ***Prevalence of self-suspected TB :*** In all 47 CS stated that they had suspected that they were suffering from TB (24 rural and 23 urban). Prevalence rate for self-suspected TB are shown in Table 66 and Fig.16. This rate did not differ between rural and urban areas (0.18% and 0.17% respectively). While the rates for males and females did not differ in rural areas, it was 0.10 for females and 0.24% among males in urban areas. This rate increased with age in rural and urban areas.

5.1.5 ***Prevalence of reportedly diagnosed TB :*** Some CS stated that they have been told by HF contacted that they were suffering from TB. Overall prevalence rate for such reportedly diagnosed TB in Karnataka was 0.21%. This rate was 0.24% among males and 0.18% among females (Table 66). Prevalence rate increased steadily with age from 0.15% in 15-34 to 0.26% in 35-54 and to 0.32% in 55+ age group. This trend was observed among males and females (not shown in Table). The relevant figures were : 0.16%, 0.19% and 0.24% respectively among females and 0.14%, 3.3% and 4.1% respectively among males. Prevalence rate was 0.25% in urban areas and 0.19% in rural areas. This rural-urban difference was, however, not observed in 55+ age group. Among males, prevalence rate was smaller in rural areas. All the differences were quire small.

Table - 66

Prevalence rates for self suspected and reportedly diagnosed TB cases for age and sex groups in Rural and Urban areas (Karnataka)

Area	Female		Male		Age Group							
					15-34		35-54		55+		Total	
	No.	PR (%)	No.	PR (%)	No.	PR (%)	No.	PR (%)	No.	PR (%)	No.	PR (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Self suspected TB												
Rural	12	0.18	12	0.18	8	0.11	9	0.21	7	0.36	24	0.18
Urban	7	0.10	16	0.24	8	0.11	10	0.23	5	0.29	23	0.17
Total	-	**0.16**	-	**0.20**	-	**0.11**	-	**0.22**	-	**0.34**	-	**0.18**
Reportedly diagnised TB												
Rural	12	0.18	14	0.21	10	0.14	9	0.21	7	0.36	26	0.19
Urban	12	0.18	22	0.32	13	1.7	17	0.39	4	0.23	34	0.25
Total	-	**0.18**		**0.24**		**0.15**		**0.26**		**0.32**		**0.21**

Fig 16 Prevalence rate (%) by age of self suspected and diagnosed TB cases in Karnataka

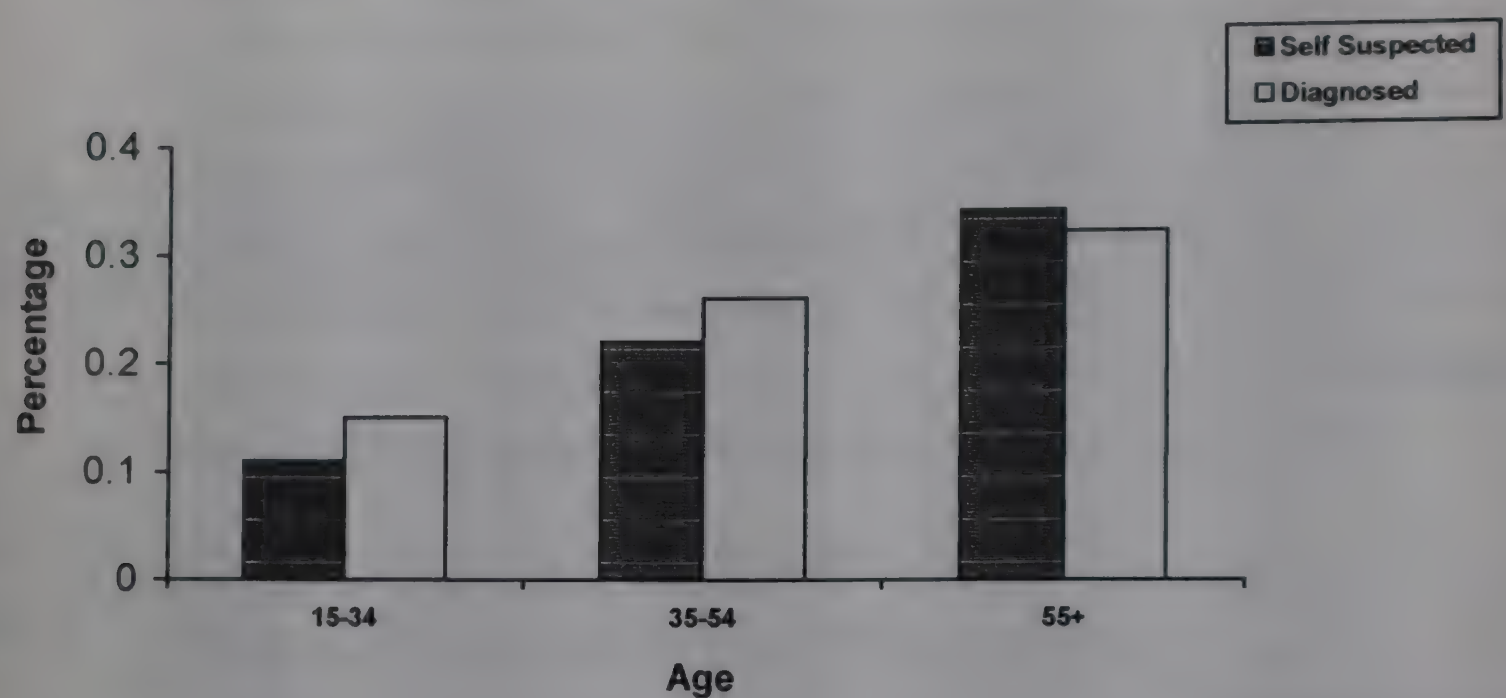
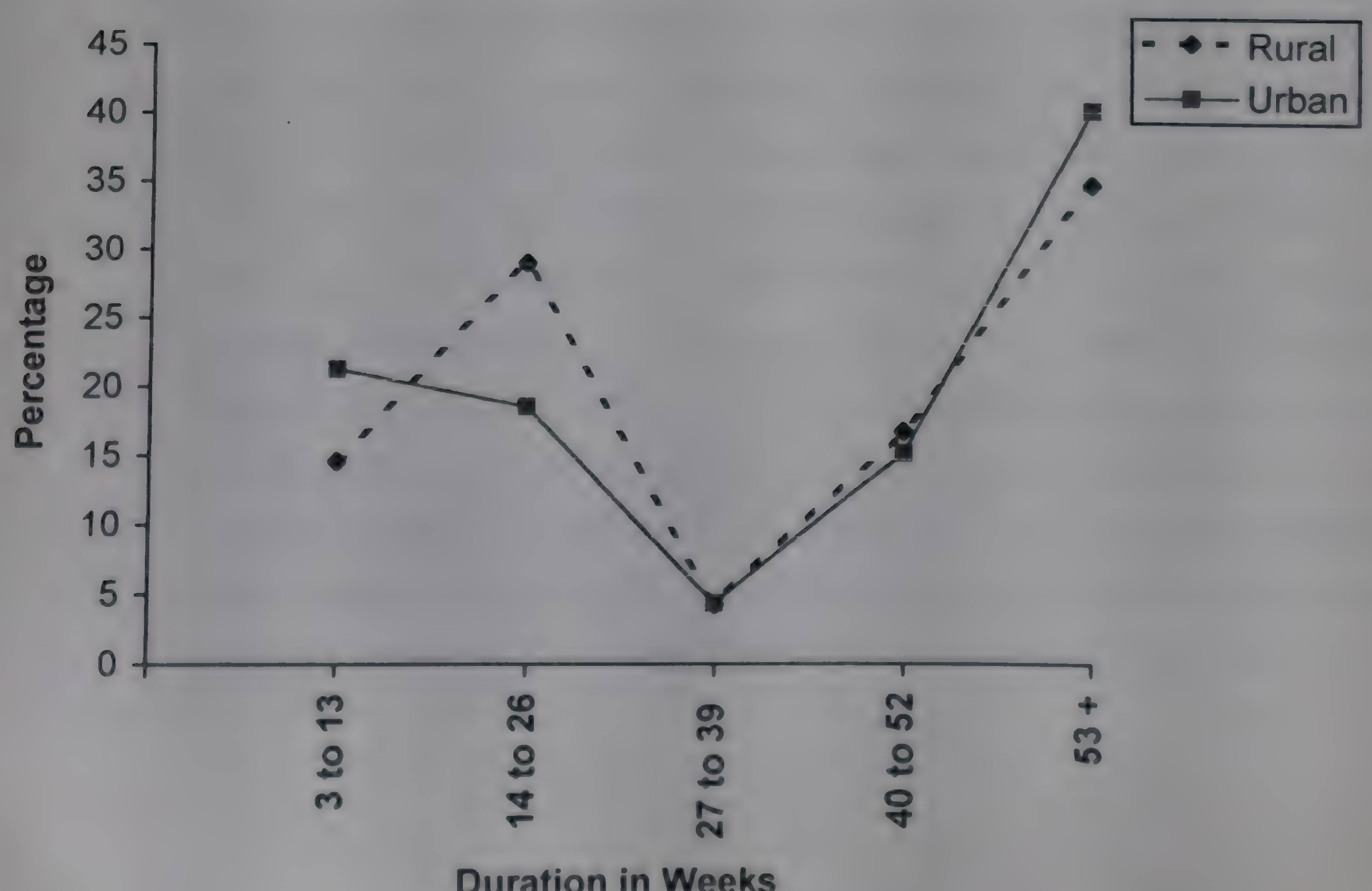


Fig 17 : Duration of Cough among CS in Rural and Urban Karnataka



5.2 Duration of sickness

5.2.1 ***Duration of sickness among for main groups of sickness :*** Among those with fever, more than 80% had symptoms for less than 8 days (Table 67). The frequencies did not differ between the other durations. About 3% only had fever for 29+ days and may include some TB cases. The other three distributions were U-shaped. Among these, the two peaks were comparatively more balanced for the Diarrhoea group with 53.4% having duration less than 8 days and 31.7% of 29+ days. Among those with general problems (aches, pains etc), 28.5% had symptoms for less than 8 days but more of them (54.6%) had it for 29+ days indicating that chronic diseases were more in this group. About 65% of the cough group had symptoms for less than 8 days and only 20% for 29+ days. Only 1.4% had cough for 22-28 days. If this group does not include TB cases, it opens up the question whether the definition of CS should be based on cough for more than three weeks or cough for four weeks or more. There was hardly any difference between rural and urban areas with regard to duration of cough.

5.3 Action taken by sick persons

5.3.1 ***Action taken for other symptoms :*** Among SPs with other symptoms, 3.9% did not take any action and 3.0% took action without consulting any health facility (Table 68, Col.6). Thus, 93% had consulted some HF. The vast majority (77.7%) had consulted HFs at primary level – 61.5% PMP and only 15.7% PHC. While 13.1% consulted secondary level HFs (11.7% GH and only 1.3% NGH), hardly anyone (0.7%) consulted both primary and secondary level HFs. The main contribution (62.5%) was from PMP (either alone or in combination with others) (Fig.18). Even in rural areas, the contribution of PHC was much less (22.7% only). While GH contributed 12.3%, NGH contributed only 1.6%. There was hardly any difference between rural and urban areas except that the latter made more direct use of GH since there was no government HF like PHC there.

Table - 67

Duration of sickenss for persons with four main groups of symptoms (Karnataka)

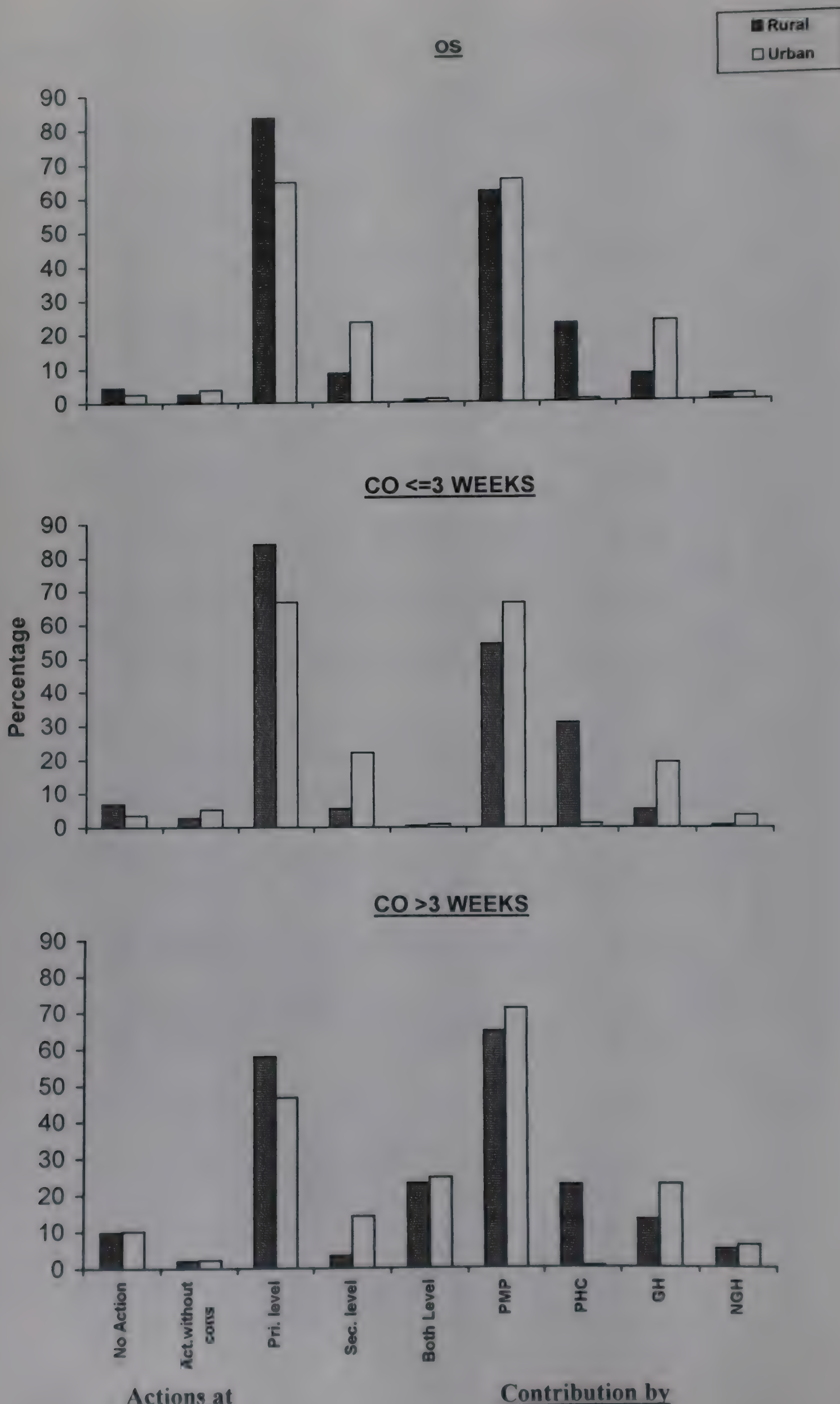
Symptom Group	Duration of sickness (in days)					
	< 8 days	8-14	15-21	22-28	29+	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cough: No -R	1134	164	83	26	361	1768
-U	1141	159	68	21	354	1743
% -R	64.1	9.3	4.7	1.5	20.4	
-U	65.5	9.1	3.9	1.2	20.3	
-T	64.5	9.2	4.5	1.4	20.4	
Fever No -R	883	77	43	35	38	1076
-U	773	53	49	19	30	924
% -R	82.1	7.2	4.0	3.3	3.5	
-U	83.7	5.7	5.3	2.1	3.2	
-T	82.6	6.8	4.4	2.9	3.4	
Diarrhoea No -R	381	33	29	49	220	712
-U	284	17	18	35	180	534
% -R	53.5	4.6	4.1	6.9	30.9	
-U	53.2	3.2	3.4	6.6	33.7	
-T	53.4	4.2	3.9	6.8	31.7	
General problems -R	188	21	51	40	368	668
-U	159	20	41	32	289	541
% -R	28.1	3.1	7.6	6.0	55.1	
-U	29.4	3.7	7.6	5.9	53.4	
-T	28.5	3.3	7.6	6.0	54.6	

Table - 68

Action taken by persons suffering from cough and other symptoms during last six months in Rural and urban Karnataka

Health facilities contacted	Suffering from														
	Other Symptoms (OS)					Cough ≤ 3 weeks					Cough > 3 weeks				
	No.		Action taking %			No.		Action taking %			No.		Action taking %		
	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. No action	155	81	4.4	2.6	3.9	61	32	6.9	3.5	5.9	29	23	9.8	10.1	9.9
2. Action without medical consultation	95	116	2.7	3.8	3.0	27	48	3.0	5.2	3.7	6	5	2.0	2.2	2.1
3. Primary level	2925	1993	83.3	64.5	77.7	746	614	84.0	66.7	78.8	171	106	58.0	46.7	54.6
- PMP	2129	1969	60.6	63.7	61.5	473	602	53.3	65.4	56.9	118	105	40.0	46.3	41.9
- PHC	775	22	22.1	0.7	15.7	268	11	30.2	1.2	21.5	29	0	9.8	0.0	6.9
4. Secondary level	302	728	8.6	23.5	13.1	48	202	5.4	22.0	10.4	10	32	3.4	14.1	6.6
- GH	251	688	7.1	22.3	11.7	41	168	4.6	18.3	8.7	6	24	2.0	10.6	4.6
- NGH	50	33	1.4	1.1	1.3	7	34	0.8	3.7	1.7	2	5	0.7	2.2	1.2
5. Primary and secondary level	22	31	0.6	1.0	0.7	5	8	0.6	0.9	0.7	68	56	23.1	24.7	23.6
TOTAL CONTRIBUTION (ALONE OR IN COMBINATION) BY															
(a) PMP	2161	1999	61.5	64.7	62.5	481	611	54.2	66.4	57.9	192	162	65.1	71.4	67.0
(b) PHC	797	23	22.7	0.7	16.1	275	12	31.0	1.3	22.1	67	1	22.7	0.4	16.0
(c) GH	269	714	7.7	23.1	12.3	46	176	5.2	19.1	9.4	39	52	13.2	22.9	16.1
(d) NGH	56	50	1.6	1.6	1.6	7	34	0.8	3.7	1.7	15	14	5.1	6.2	5.4
TOTAL	**3513**	**3092**				**888**	**920**				**295**	**227**			

Fig 18: Action taken by OS and CO of short and long duration in Rural & Urban Karnataka



5.3.2 ***Action taken by cough of shorter duration :*** Those with cough for three weeks or less showed the same pattern as SPs with Other Symptoms (Table 68, Col.9-11). This could be expected because SPs may not differentiate between cough and other symptoms until cough persists.

5.3.3 ***Action taken for Cough of longer duration :*** Surprisingly, percentage not taking action was higher (9.9%) among those with cough for more than three weeks and 2.1% took action without consulting a HF (Table 68, Col.16). Thus, the proportion consulting a HF was reduced to 88% compared to 93% for OS and 90% for cough for three weeks or less. The **most striking change is the reduction in the use of primary level HF to 54.6% (from 77.7% for OS and 78.8% for cough of three weeks or less).** This was mainly due to the increased use of both primary and secondary level HFs (23.6%), which was almost nil for the other two groups of SPs. **Yet, the contribution of PMP was 67.0% which was much higher than that of PHC (16.0%), GH (16.1%) and NGH (5.4%).** Rural-urban differences in action taken by SPs with cough for three weeks or more was small or negligible, except for secondary level.

5.4 Duration of Cough

5.4.1 ***Duration of Cough among CS :*** Table 69 shows the duration of cough for rural and urban CS as well as for Karnataka CS. All three distributions were bimodal with the second and higher peak at 53+ weeks with percentages varying from 35.0% to 40.4%. For Karnataka and rural CS, the first peak was at 14-26 weeks with percentage of 26.0 and 29.1 respectively. Among urban CS, the first peak was at 3-13 weeks (21.3%) (Fig. 17). CS with duration of 27-39 and 40-52 weeks together formed about 20% only for all the three distributions. Thus, **CS consist of two distinct groups, one with small durations of 3-26 weeks and the other with long duration of 53+ weeks** and the trough in between probably formed by tails of either of these two group distributions or of both overlapping each other.

Table - 69

Duration of cough among CS in rural and urban areas (Karnataka)

Area	Duration in weeks)											
	Total	3-13		14-26		27-39		40-52		53+		Mean
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	Duration
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Rural	254	37	14.6	74	29.1	11	4.3	43	16.9	89	35.0	34.7
Urban	183	39	21.3	34	18.6	8	4.4	28	15.3	74	40.4	35.2
Total	-	-	**16.6**	-	**26.0**	-	**4.3**	-	**16.4**	-	**36.6**	**34.8**

5.5 Number of actions taken and factors influencing it

5.5.1 ***Number of actions taken by CS :*** The only difference between the rural and urban CS in number of actions taken is that one action was more common among urban CS (38.8%) compared to rural CS (30.3%), this being compensated by a lower frequency for two actions by urban CS (24.0%) compared to 29.9% by rural CS (Table 70). Overall, one action had the highest frequency (32.8%) followed by two actions (28.1%) and by three actions (16.6%). Percentage taking no action did not differ between rural and urban CS.

5.5.2 ***Factors influencing number of actions :*** Influence of a number of factors were studied. These gave a mixed picture. To understand the situation better, these have been arranged into groups which are presented in the following paragraphs :

(a) ***Not taking action :*** Among rural and urban CS, **percentage not taking any action increased steadily with age** (overall percentage varying from 8.9 to 17.0) (Fig. 19). It was more (about double) among males, overall percentage being 17.7 among males and 9.8 among females. It was least among Other Hindus (overall 6.3) and highest among rural SC/ST (22.8) and among urban BCs (18.8). **This percentage decreased steadily with increase in duration of cough among rural CS (from 21.6 to 10.2) and with increase in family size among urban CS (from 30.0 to 10.5).**

(b) ***Taking three or more actions:*** Percentage taking three or more actions increased steadily with increase in duration of cough (Fig.20) among rural and urban CS (overall percentage varying from 5.6 to 37.2). It was higher among housewives compared to unemployed and students and employed (overall percentage being 29.8, 19.0 and 20.4 respectively). There was no difference between males and females. This percentage decreased steadily with age among rural CS (from 32.3 to 20.9). Among urban CS, it was higher

Table - 70

Distribution of CS by No.of actions taken (Karnataka)

	No.of actions						
	0	1	2	3	4	5+	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
No. of CS							
Rural	37	77	76	45	15	3	254*
Urban	28	71	44	26	12	2	183
Percent of CS							
Rural	14.6	30.3	29.9	17.7	5.9	1.2	-
Urban	15.3	38.8	24.0	14.2	6.6	1.1	-
Total	**14.8**	**32.8**	**28.1**	**16.6**	**6.1**	**1.2**	-

* Excludes one case No. of actions not stated

FIG 19 : Influence of Age , Family Size and Duration of Cough on no action in Rural and Urban Karnataka

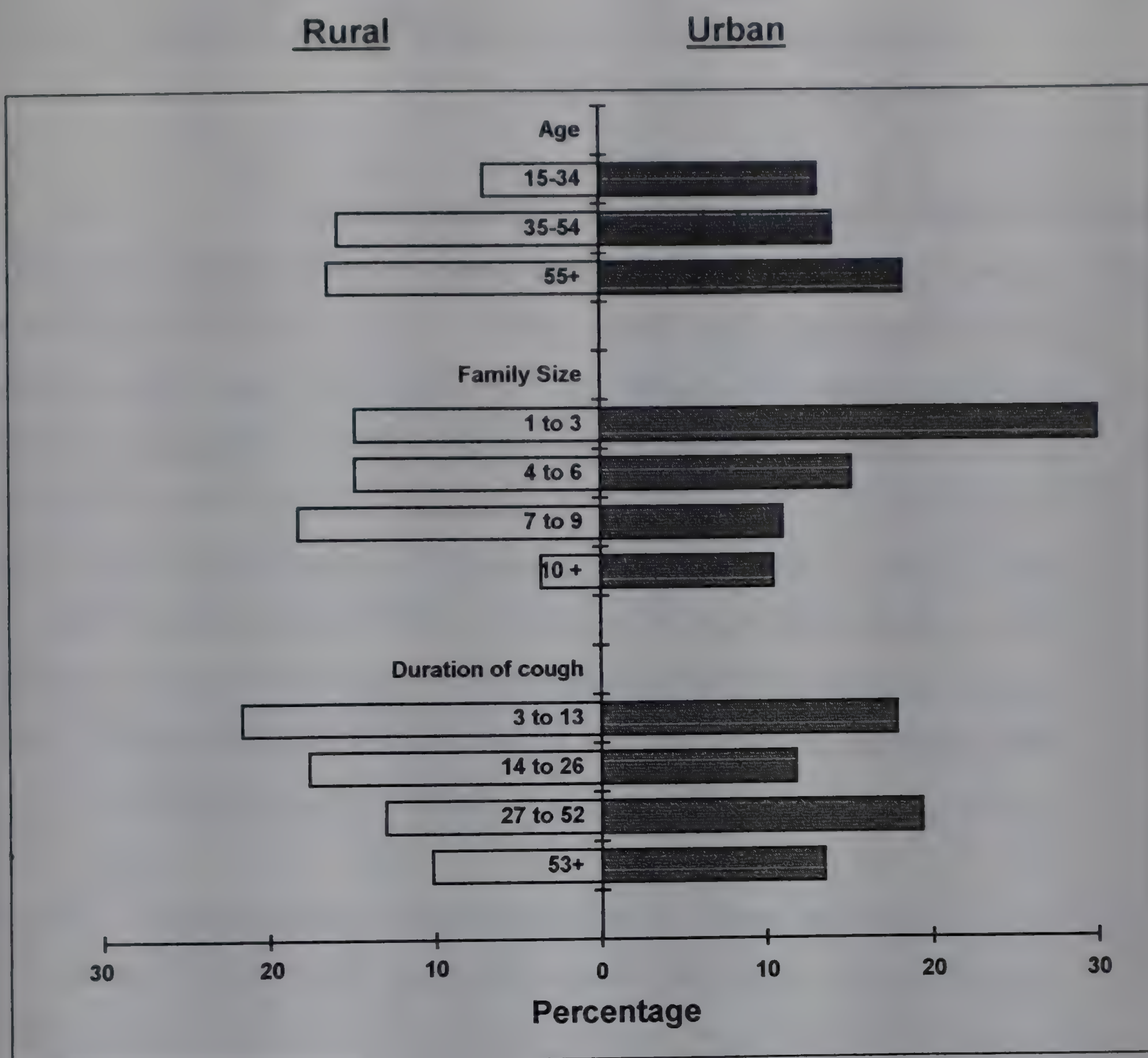
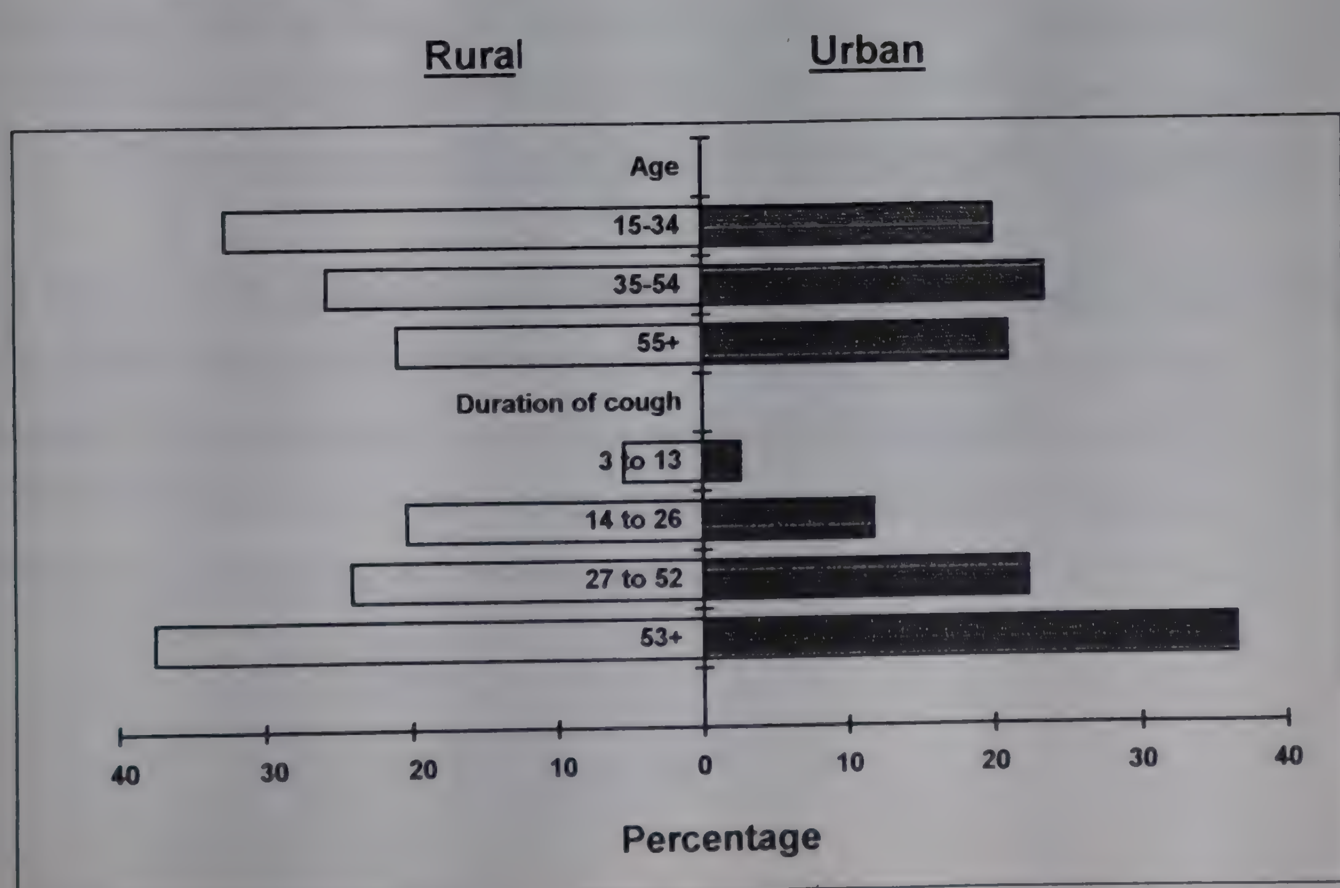


Fig 20 : Influence of Age, and duration of cough on 3 or more number of actions taken in Rural and Urban Karnataka.



in nuclear families (25.0) compared to joint families (20.0) and lowest among SC/ST (17.4) and highest among Other Hindus (29.4) with BCs in between (23.2). Among rural CS also, this percentage was least among SC/ST (20.6) compared to about 30 among BCs and Other Hindus.

5.6 Interval between onset of symptoms and each action

5.6.1 ***Interval between onset of symptoms and first action :*** Among rural CS, the first action was taken within 1-7 days by 40.7% compared to 34.8% by urban CS (Table 71). This difference was compensated by 32.9% of urban CS taking action within 8-15 days as against 26.4% by rural CS (Fig.21). Thus, 67.1% of rural and 67.7% of urban CS had taken action within 15 days and 81.0% and 81.9% respectively within 30 days. With a small proportion of urban CS (3.9%) taking action within 31-60 days compared to 10.2% by rural CS, the proportion who had taken action within 60 days became less for urban CS (85.8%) compared to rural CS (91.2%). This level of difference was maintained upto 360 days.

5.6.2. ***Interval between onset of symptoms and second action :*** The pattern was almost the same for rural and urban CS (Table 71 and Fig.21). Overall, 6.7% had taken second action within 15 days, 23.6% within 30 days, 41.5% within 60 days, 53.5% within 90 days and 66.5% within 150 days. Second action was taken by 28.6% of urban CS after 360 days compared to 15.1% by rural CS. Since the vast majority had taken first action within 15 days, this indicates that second action was taken after a fairly long interval after the first action, particularly by urban CS.

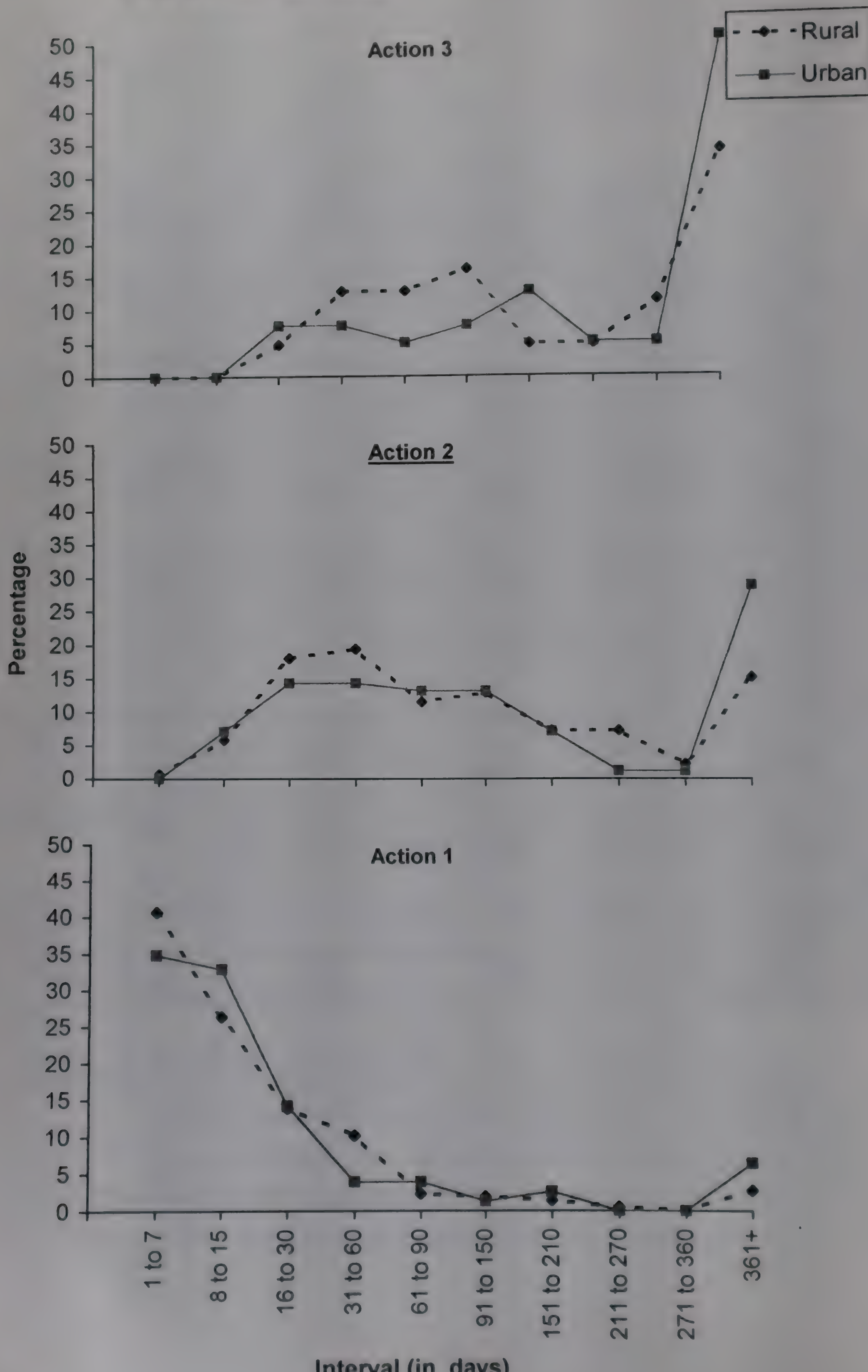
5.6.3 ***Interval between onset of symptoms and third action :*** Table 71 and Fig.21 show that the proportion who had taken third action within intervals of 31-60, 61-90 and 91-150 days was higher among rural CS compared to urban CS. Those who had taken action within intervals of 151-210 days and 361+ days were more among urban CS, particularly the latter with

Table - 71

Interval between onset of symptoms and different actions (Karnataka)

Action	Interval for action (days)										
	1-7	8-15	16-30	31-60	61-90	91-150	151-210	211-270	271-360	361+	No.of CS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Mean
Action 1 - R %	*41*	*26*	*13.9*	*10.2*	*2.3*	*1.9*	*1.4*	*0.5*	*0.0*	*2.8*	*216*
Cum %	*41*	*67*	*81.0*	*91.2*	*93.5*	*95.4*	*96.8*	*97.3*	*97.3*	*100.0*	*38.1*
- U %	*35*	*33*	*14.2*	*3.9*	*3.9*	*1.3*	*2.6*	*0.0*	*0.0*	*6.5*	*155*
Cum %	*35*	*68*	*81.9*	*85.8*	*89.7*	*91.0*	*93.6*	*93.6*	*93.6*	*100.0*	*45.4*
- T %	*39*	*28*	*14.0*	*8.3*	*2.8*	*1.7*	*1.8*	*0.4*	*0.0*	*3.9*	
Cum %	*39*	*67*	*81.3*	*89.6*	*92.4*	*94.1*	*95.9*	*96.3*	*0.0*	*100.0*	
Action 2 - R %	*0.7*	*5.8*	*18.0*	*19.4*	*11.5*	*12.9*	*7.2*	*7.2*	*2.2*	*15.1*	*139*
Cum %	*0.7*	*6.5*	*24.5*	*43.9*	*55.4*	*68.3*	*75.5*	*82.7*	*84.9*	*100.0*	*169*
- U %	*0.0*	*7.1*	*14.3*	*14.3*	*13.1*	*13.1*	*7.1*	*1.2*	*1.2*	*28.6*	*84*
Cum %	*0.0*	*7.1*	*21.4*	*35.7*	*48.8*	*61.9*	*69.0*	*70.2*	*71.4*	*100.0*	*191.5*
- T %	*0.5*	*6.2*	*16.9*	*17.9*	*12.0*	*13.0*	*7.2*	*5.4*	*1.9*	*19.2*	
Cum %	*0.5*	*6.7*	*23.6*	*41.5*	*53.5*	*66.5*	*73.7*	*79.1*	*81.0*	*100.0*	
Action 3 - R %	*0.0*	*0.0*	*4.8*	*12.7*	*12.7*	*15.9*	*4.8*	*4.8*	*11.1*	*33.3*	*63*
Cum %	*0.0*	*0.0*	*4.8*	*17.5*	*30.2*	*46.1*	*50.9*	*55.7*	*66.8*	*100.0*	*303.5*
- U %	*0.0*	*0.0*	*7.5*	*7.5*	*5.0*	*7.5*	*12.5*	*5.0*	*5.0*	*50.0*	*40*
Cum %	*0.0*	*0.0*	*7.5*	*15.0*	*20.0*	*27.5*	*40.0*	*45.0*	*50.0*	*100.0*	*313.3*
- T %	*0.0*	*0.0*	*5.6*	*11.1*	*10.4*	*13.4*	*7.1*	*4.9*	*9.3*	*38.3*	
Cum %	*0.0*	*0.0*	*5.6*	*16.7*	*27.1*	*40.5*	*47.6*	*52.5*	*61.8*	*100.0*	

Fig 21 : Interval between onset and each action by CS in Rural & Urban Karnataka



percentages of 50.0 and 33.0 for urban and rural CS respectively. It is significant that one third of rural CS and half of urban CS took third action after 360 days. Upto 150 days from onset of symptoms, only 27.5% of urban CS had taken third action compared to 46.1% of rural CS. These indicate that there was lot of delay by urban CS for taking third action – much more than for second action.

5.7 Health facilities contacted

5.7.1 ***Health facilities contacted for first action :*** The vast majority of rural and urban CS (62.5% and 70.3% respectively) had taken the first action by contacting PMP (Table 72 and Fig.22). Popularity of PHC among rural CS was quite low, only 22.7% contacting it. GH was contacted by 11.1% of rural CS and 213% of urban CS. Three urban CS contacted sanatorium even for first action.

5.7.2 ***Health facilities contacted for second action :*** Table 72 and Fig.22 show that frequency of contacts to different HFs for second action did not differ between rural and urban CS. The only exception was a higher proportion of urban CS contacting sanatorium (11.9%) compared to rural CS (5.8%). PMP was still the most popular (overall 59.3%) and only 7.4% contacted PHC (10.1% by rural CS). GH was more popular with 17.5% contacting it. NGH was contacted by 6.6% and sanatorium by 7.6%. Two each of rural and urban CS visited DTC for second action.

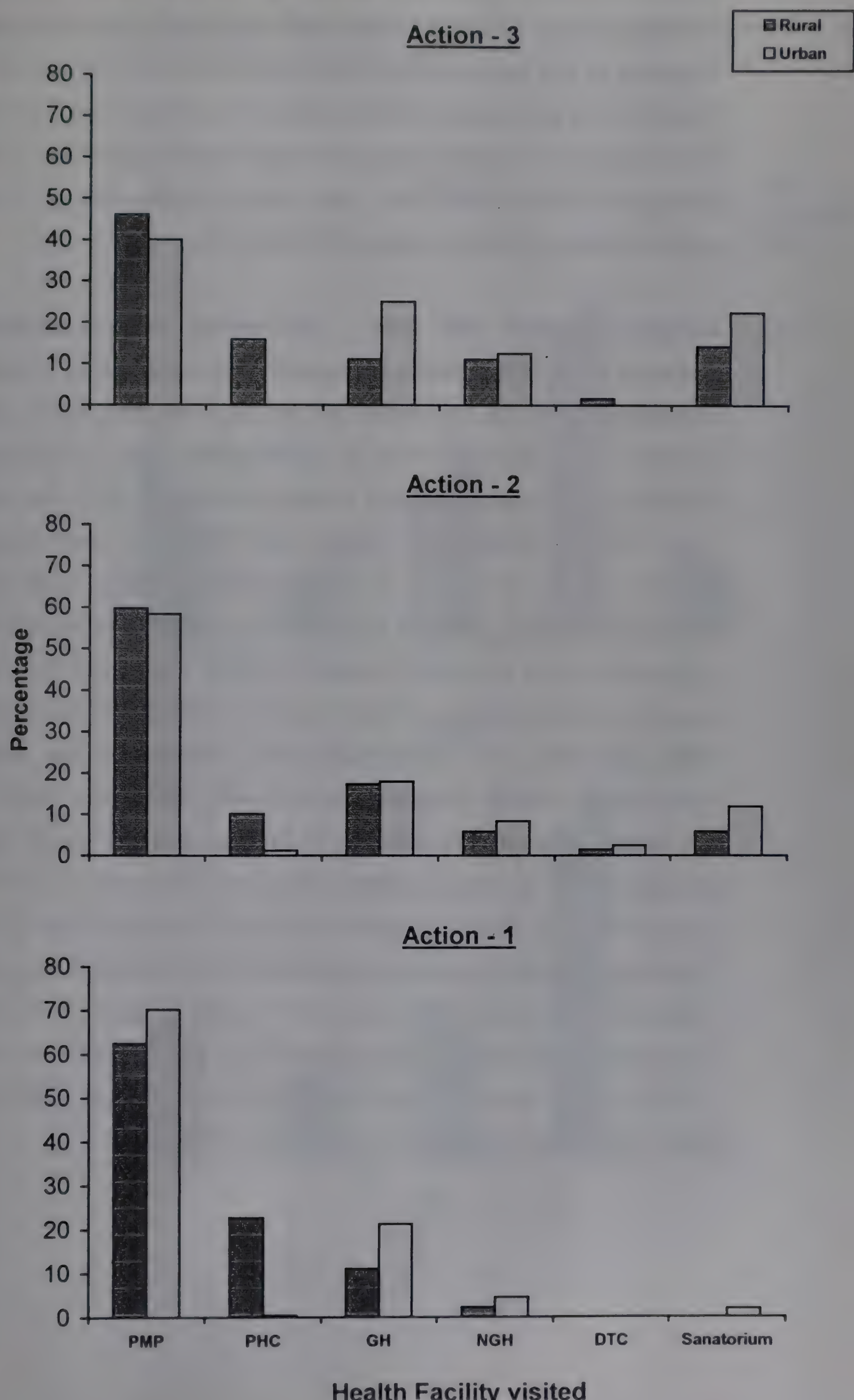
5.7.3 ***Health facilities contacted for third action :*** Even for third action 44.2% contacted PMP (46.0% rural and 40.0% urban) and 15.9% of rural CS contacted PHC (more than for second action) (Table 72 and Fig.22). GH was contacted by more urban CS (25.0%) than by rural CS (11.1%). NGH had become popular with 11.5% contacting it. So also sanatorium which attracted 22.5% urban CS and 14.3% rural CS. Yet, the number of CS contacting these HFs was quite small. Only one rural CS consulted DTC for third action.

Table - 72

Distribution of CS by type of health facility contacted for each action (Karnataka)

Health facility contacted	Action 1					Action 2					Action 3				
	No.		Action taking %			No.		Action taking %			No.		Action taking %		
	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
PMP	135	109	62.5	70.3	64.8	83	49	59.7	58.3	59.3	29	16	46.0	40.0	44.2
PHC	49	1	22.7	0.6	16.1	14	1	10.1	1.2	7.4	10	0	15.9	0.0	11.1
GH	24	33	11.1	21.3	14.2	24	15	17.3	17.9	17.5	7	10	11.1	25.0	15.3
NGH	5	7	2.3	4.5	3.0	8	7	5.8	8.3	6.6	7	5	11.1	12.5	11.5
DTC	0	0	0.0	0.0	0.0	2	2	1.4	2.4	1.7	1	0	1.6	0.0	1.1
Sanatorium	0	3	0.0	1.9	0.6	8	10	5.8	11.9	7.6	9	9	14.3	22.5	16.8
Others	3	2	1.4	1.3	1.4	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0
TOTAL	**216**	**155**				**139**	**84**				**63**	**40**			

Fig 22 : Health facility contacted by CS for various actions in Rural & Urban Karnataka

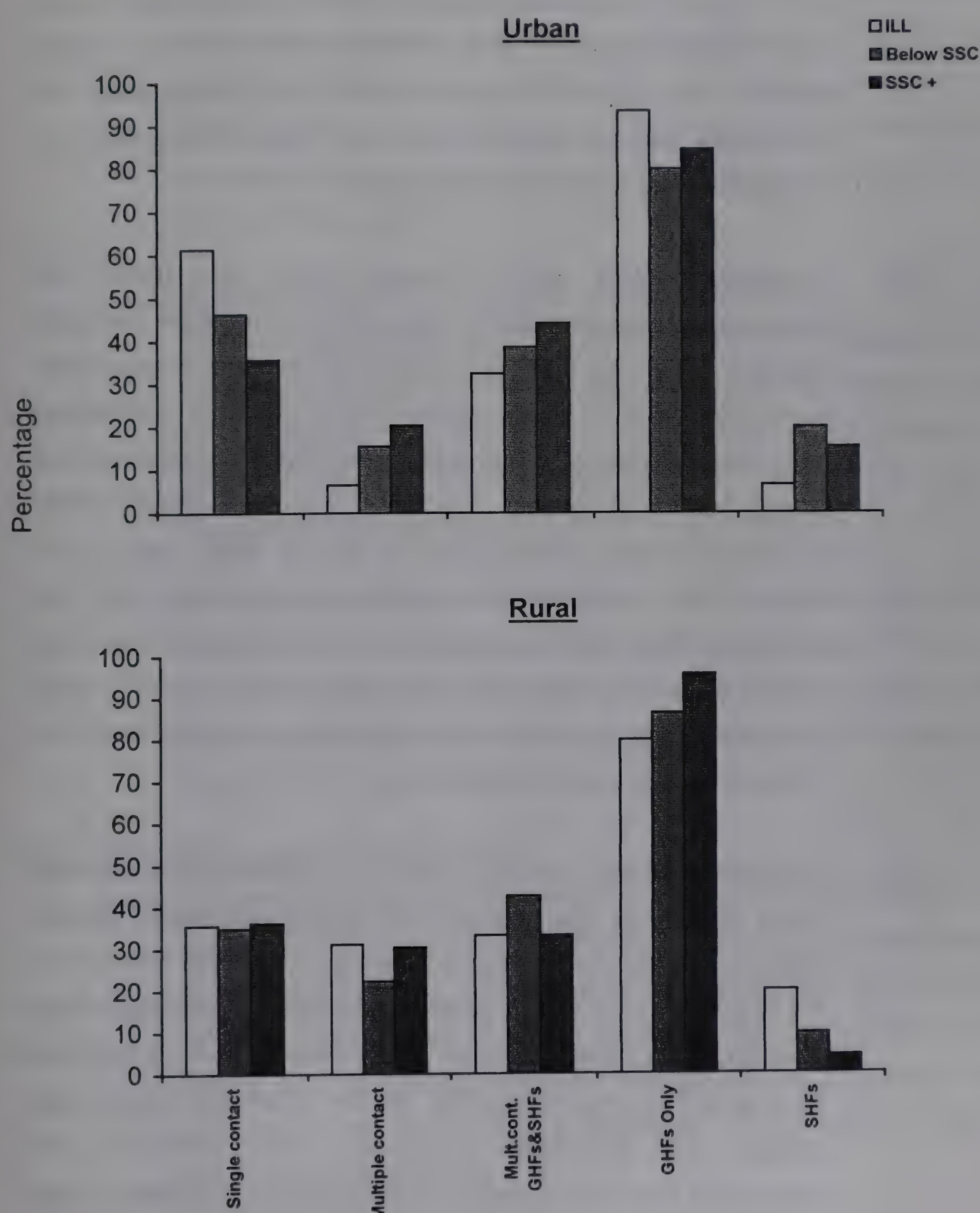


5.7.4 ***Factors influencing contacts with HFs :***

(a) ***Single contacts with HFs :*** **Among urban CS, percentage making single contacts with HFs decreased steadily with increase in the highest education level in HH** from 61.3 to 35.6 (Fig.23). This was mainly due to decrease in contacts with GH from 22.1% to 5.1%. This percentage was higher among SC/ST (47.3%) compared to BCs (33.9). Sex, age, type of family, size of family and occupation did not influence this behaviour.

(b) ***Multiple contacts with HFs :*** **Percentage making multiple contacts with HFs steadily increased with increase in highest education level in HH from 6.5 to 20.3, among urban CS** (Fig.23). This was mainly due to contacts with PMP because the number of CS making multiple contacts with other HFs was very small. This percentage for contacts with PMP was lower among females (11.3) compared to males (18.3). Among rural CS, percentage making contacts with all HFs together was highest for age group 15-34 (42.5) and lowest for 35-54 (16.5) with 55+ age group in between (29.3). Pattern was the same for contacts with PMP and PHC, but differences were smaller for the latter. Percentage making multiple contacts with PMP was lower in smaller families with 1-6 persons (17.3) compared to those in large families with 7 or more persons (23.3). It was lower for CS in nuclear families (14.9) compared to those in joint families (22.1). Percentage making multiple contacts with all HFs together was also lower in nuclear families 21.6 compared to joint families (28.7). This percentage was higher among SC/ST (36.6) compared to BCs (19.3). Pattern was the same for multiple contacts with (PMP) or PHC. Type of occupation did not make any difference.

Fig 23 : Influence of Highest Education Level in HH on contacts with HFs by CS in Rural and Urban Karnataka



(c) ***Multiple contacts with GHFs and SHFs :*** **Among urban CS, percentage making multiple contacts with GHFs and SHFs increased steadily with increase in the highest education level in HH** (from 32.3 to 44.1) (Fig.23). Among rural CS, this percentage was 33.3 for illiterates and SSC+ but was higher for below SSC (42.7). It was 37.6 among females and 30.3 among males. Among both rural and urban CS, this percentage was smaller in nuclear families (26.4) compared to joint families (34.7), among urban CS. Differences between groups according to age, family size and occupation were either small or negligible.

(d) ***Contacting GHFs only :*** **Among rural and urban CS, percentage contacting GHFs only (single or multiple contacts) steadily increased with age,** the range for overall percentage being from 79.6 to 92.9). **Among rural CS, this percentage increased steadily with increase in the highest education level in HH** from 80.0 to 95.7 (Fig.23). It was 90.1 among SC/ST compared to 83.5 among BCs and 85.8 in family size 1-6 as against 91.1 in families of size 7+. Among urban CS, this percentage was higher in smaller families (88.8) compared to larger families (77.2). It was 88.7 among females and 81.7 among males. Difference between groups formed according to type of family and occupation were small or negligible.

(e) ***Contacting SHFs :*** **Among rural CS, percentage contacting SHFs (mostly in combination with GHFs) decreased steadily with increase in the highest education level in HH** from 20.0 to 4.3 (Fig.23). There was a **similar decrease in this percentage from 20.0 to 4.3 with increase in age among rural CS and from 21.2 to 6.1 among urban CS** but the difference between age groups 15-34 and 35-54 was small. Among urban CS, this percentage was less in smaller families (11.2) compared to larger

families (22.8) and for housewives (12.2) compared to employed (20.7). There were no differences with regard to type of family, sex and religion and caste.

5.8 Distance travelled for each action

5.8.1 ***Distance travelled for first action :*** Table 73 shows that rural CS had to travel longer distances. Percentage travelling less than 1 km was 23.3 for rural CS and 29.0 for urban CS (Fig.24). The difference was even more for those travelling 1-5 km (42.8 rural and 66.5 urban). Overall about 75% had travelled upto 5 km. This was due to the vast majority using PMP. Only 3.4% of CS travelled more than 40 km.

5.8.2. ***Distance travelled for second action :*** Both rural and urban CS had travelled longer distances for second action, the mean distance being 20.7 km for rural CS and 15.1 km for urban CS (Table 73). Those travelling 6-40 km was more among rural CS (Fig.24). While 32.4% of rural CS and 58.3% of urban CS had travelled upto 5 km only, 17.2% and 19.1% respectively travelled more than 40 km for second action.

5.8.3 ***Distance travelled for third action :*** The average distance travelled increased for third action (26.7 km for rural and 19.0 km for urban CS) (Table 73). Those travelling less than 1 km and 1-5 km were less among rural CS compared to urban CS (Fig.24). Overall, 42.4% travelled upto 5 km and 27.9% more than 40 km.

5.9 Symptoms present at each action

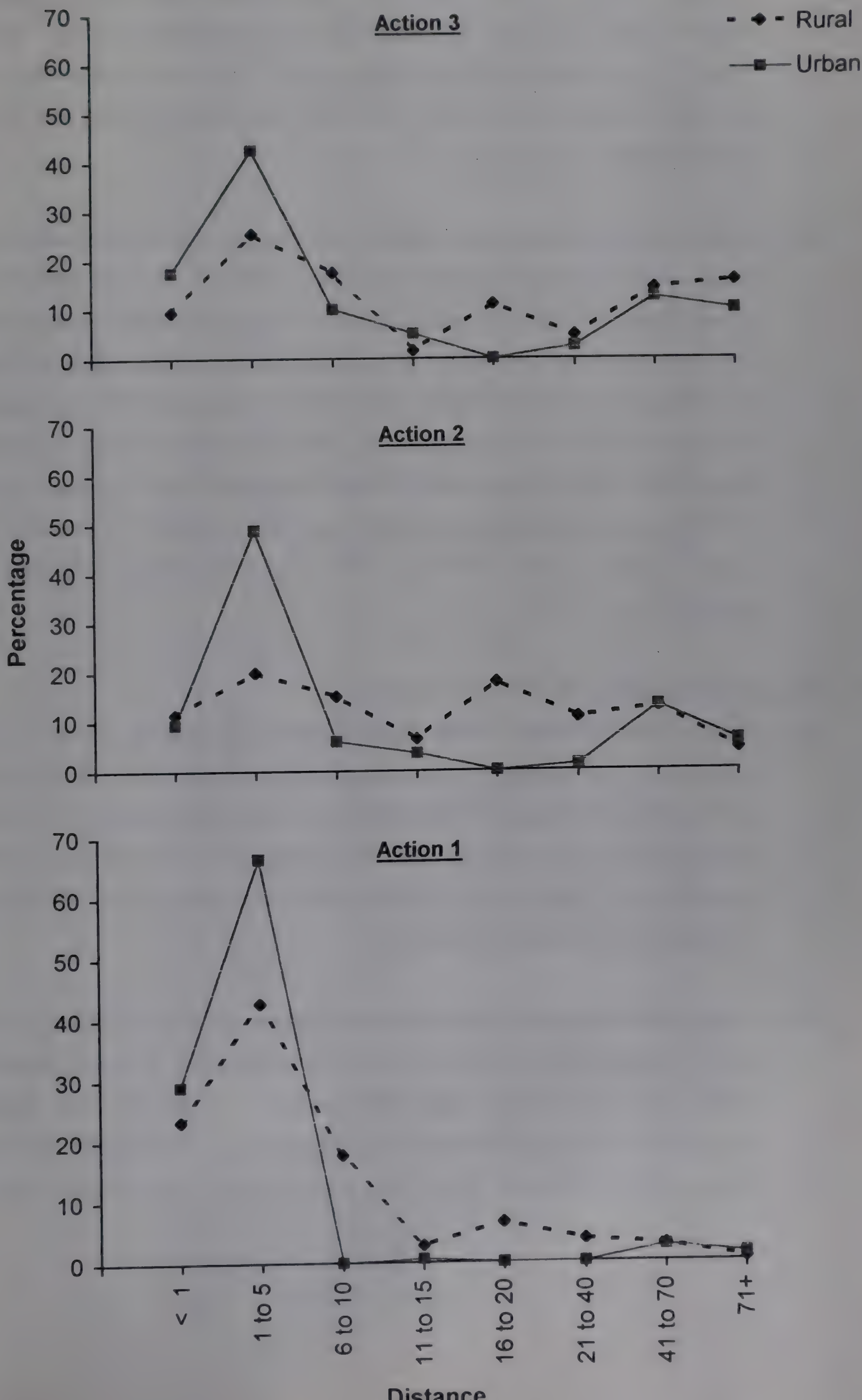
5.9.1 ***Symptoms present at first action :*** The most common symptom was cough and one more symptom (40.0%) (Table 74). This was followed by cough alone (27.2%). While the former symptom was more among rural CS (41.7%) as against 36.1% for urban CS, the latter symptom was less among rural CS (25.0%) compared to urban CS (32.3%). Cough and two more symptoms came next in frequency (17.1% overall). Those with haemoptysis formed 8.1% only.

Table - 73

Distribution of CS by distance travelled for each action (Karnataka)

Distance (Km.)	Action 1					Action 2					Action 3				
	No.		Action taking %			No.		Action taking %			No.		Action taking %		
	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
<1	50	45	23.3	29.0	25.0	16	8	11.5	9.5	10.9	6	7	9.5	17.5	11.9
1-5	92	103	42.8	66.5	49.9	29	41	20.9	48.8	29.3	16	17	25.4	42.5	30.5
6-10	38	0	17.7	0.0	12.4	21	5	15.1	6.0	12.4	11	4	17.5	10.0	12.3
11-15	6	1	2.8	0.6	2.1	9	3	6.5	3.6	5.6	1	2	1.6	5.0	2.6
16-20	14	0	6.5	0.0	4.6	25	0	18.0	0.0	12.6	7	0	11.1	0.0	7.7
21-40	8	0	3.7	0.0	2.6	15	1	10.8	1.2	7.9	3	1	4.8	2.5	4.1
41-70	6	4	2.8	2.6	2.7	18	11	12.9	13.1	13.0	9	5	14.3	12.5	13.8
71+	1	2	0.5	1.3	0.7	6	5	4.3	6.0	4.8	10	4	15.9	10.0	14.1
TOTAL	**215**	**155**				**139**	**84**				**63**	**40**			
Mean distance			**7.5**	**4.2**	**6.5**			**20.7**	**15.1**	**19.0**			**26.7**	**19.0**	**24.4**

Fig 24 : Distance travelled by CS for each action in Rural and Urban Karnataka



5.9.2 ***Symptoms present at second action :*** Table 74 (Cols 9-11) shows that the pattern for second action was similar with cough and one more symptom being most common (27.4%) among urban CS followed by cough alone (21.4%) and cough and two more symptoms (14.3%). Among rural CS also cough and one more symptom was most popular (31.7%) but was followed by cough and two more symptoms (21.6%) and cough alone (18.7%).

5.9.3 ***Symptoms present at third action :*** Among rural CS, for third action also cough and one more symptom was most common (31.7%) followed by cough alone (17.5%) and cough and two more symptoms (14.3%) (Table 74). Among urban CS, cough alone and cough and one more symptom were equally frequent (17.5%). Thus, there were only minor changes in the type of symptoms present at the time of the three actions, except for cough with haemoptysis which increased steadily from 8.1% at first action to 13.8% at second action and to 20.1% at third action. The increase was steeper among urban CS (from 7.7% to 30.0%) compared to rural CS (from 8.3% to 15.9%).

5.10 Reason for choosing HF for each action

5.10.1 ***Reason for choosing HF for first action :*** Vast majority (62.8%) of CS choose the HF because of convenience (64.2% rural and 59.7% urban) (Table 75 and Fig.25). While advice by family and friends had higher frequency among rural CS, (22.3%) compared to urban CS (16.2%), expectation of better service had less frequency among rural CS (19.3%) as against 24.0% among urban CS.

5.10.2 ***Reason for choosing HF for second action :*** The most striking is that **only 13.3% of CS had made their choice because of convenience (a steep fall from 64.2% for first action)** (Table 75 and Fig.25). **Expectation of better service had increased to 43.9% (from 16.7% for first action)**, advice of family and friends 34.0% (from 20.5% for first

Table - 74

Distribution of CS by symptoms present at each action (Karnataka)

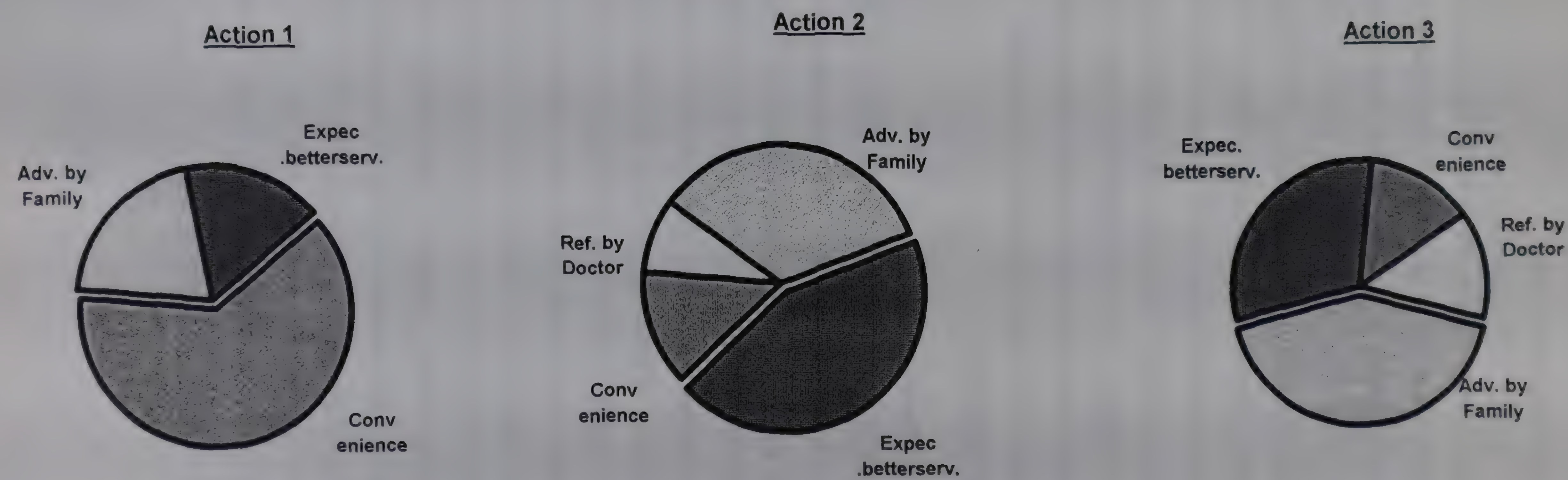
Symptoms	Action 1					Action 2					Action 3				
	No.		Percent			No.		Percent			No.		Percent		
	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. Cough with blood in sputum	18	12	8.3	7.7	8.1	14	19	10.1	22.6	13.8	10	12	15.9	30.0	20.1
2. Without blood in sputum and with															
(a) Cough alone	54	50	25.0	32.3	27.2	26	18	18.7	21.4	19.5	11	7	17.5	17.5	17.5
(b) Cough 1 more symptom	90	56	41.7	36.1	40.0	44	23	31.7	27.4	30.4	20	7	31.7	17.5	27.4
(c) Cough 2 more symptoms	39	23	18.1	14.8	17.1	30	12	21.6	14.3	19.4	9	5	14.3	12.5	13.8
(d) Cough 3 more symptoms	11	10	5.1	6.5	5.5	15	8	10.8	9.5	10.4	7	5	11.1	12.5	11.5
(e) Cough 4 more symptoms	4	4	1.9	2.6	2.1	10	4	7.2	4.8	6.5	6	4	9.5	10.0	9.7
TOTAL	216	155				139	84				63	40			

Table - 75

Distribution of CS by reason for choosing the health facility contacted for each action (Karnataka)

Reason	Action 1					Action 2					Action 3				
	No.		Percent			No.		Percent			No.		Percent		
	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. Referred by Doctor	0	0	0.0	0.0	0.0	14	5	10.1	6.0	8.9	9	5	14.3	12.5	13.8
2. Advised by family, friends	48	25	22.3	16.2	20.5	44	33	31.7	39.3	34.0	22	23	34.9	57.5	41.7
3. Expectation of better service	29	37	13.5	24.0	16.7	63	34	45.3	40.5	43.9	21	10	33.3	25.0	30.8
4. Convenience	138	92	64.2	59.7	62.8	18	12	12.9	14.3	13.3	11	2	17.5	5.0	13.7
Total: Excludes information not received	**215**	**154**				**139**	**84**				**63**	**40**			

Fig 25 : Reason for choosing HF for each action by CS in Karnataka



action and referred by doctor to 8.9% (from nil for first action). Rural-urban differences were small.

5.10.3 ***Reason for choice of HF for third action:*** While convenience was equally frequent, **expectation of better service became less frequent (30.8% compared to 43.9% for second action)** (Table 75 and Fig.25). This reduction was observed among both rural and urban CS and **probably indicates frustration or disillusionment about looking for better service**. Consequently, advice of family and friends became the most common reason (41.7%) and showed an increase from 34.0% for second action. There was also a slight increase in those who choose the HF because of being referred by doctor (from 8.9% to 13.8%). **It is significant that the choice of even the third action was not guided by advice of doctor despite the repeated visits to him without any improvement.**

5.11 Diagnostic Examinations

5.11.1 ***Sputum Examination :*** Overall sputum, examination was ordered for only 23.1% of actions by CS. This percentage increased steadily from 12.3 for first action to 23.2 for second action and to 35.8 for third action. This trend was found for both rural and urban CS (Table 76). For each action, this percentage was higher for urban CS compared to rural CS. For all actions together, a larger percentage was ordered sputum examination for urban CS (28.8) compared to 20.6 for rural CS. Percentage of actions during which sputum was ordered was highest for DTC and sanatorium (mainly the latter) (93.3) followed by GH (41.3), NGH (34.2) and PMP (14.2). Rural-urban differences in this regard were either small or negligible.**The most striking finding is that PHC, which was expected to order sputum examination for all CS, ordered sputum examination for only 1.3% of the actions taken by CS**. Only for 64.4% of examinations results were told to CS. Positivity rate was 33.7% out of those examined and 52.3% out of results told. Both positivity rates were higher for urban CS compared to rural CS.

TABLE-76

Details of sputum and X-Ray examination of CS in Rural and Urban Karnataka

Examination during / by	Sputum		X-Ray		Sputum	X-Ray
	Rural	Urban	Rural	Urban	Both rural & urban*	Both rural & urban*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. % Ordered of	*20.6*	*28.8*	*22.7*	*31.9*	*23.1*	*25.5*
During						
Action 1	9.3	19.4	10.6	22.6	12.3	14.2
Action 2	20.3	32.1	35.3	36.9	23.8	35.8
Action 3	28.6	52.5	30.2	52.5	35.8	36.9
By:						
PMP	13.8	15.2	14.6	18.5	14.2	15.8
PHC	1.3	NC	0.0	NC	0.9	NC
GH	41.8	40.0	45.5	41.7	41.3	44.4
NGH	33.3	36.4	52.4	45.5	34.2	50.3
DTC } Sanatorium}	92.0	96.2	100.0	96.2	93.3	98.9
2. Result told of examined	64.0	65.5	61.6	64.5	64.4	62.5
3. % positive of examined	30.3	41.7	30.3	46.2	33.7	35.1
4. % positive of result told	47.4	63.6	49.2	71.7	52.3	56.0

* weighted average

5.11.2 ***X-ray Examination :*** Percentage of actions of CS for which X-ray examination was ordered was higher for urban CS (31.9) compared to rural CS (22.7) (Table 76). This percentage steadily increased for different actions from 22.6 to 52.5 among urban CS. Among rural CS, this percentage increased from 10.6 for first action to 35.3 for second action but decreased to 30.2 for third action. It was highest for contacts with DTC and sanatorium (mainly the latter) (98.9) followed by NGH (50.3), GH (44.4) and PMP (15.8). Rural-urban difference was observed only for contacts with NGH-52.4 (rural) and 45.5 (urban). For only 62.5% of examinations results were told to CS. Positivity rate was 35.1% out of those examined and 56.0% out of results told. Both positivity rates were higher for urban CS compared to rural CS.

5.12 TB Cases Diagnosed

5.12.1 ***TB Cases among CS :*** In all, 60 CS have been told that they were suffering from TB, 26 among rural CS and 34 among urban CS. This gives a case yield of 12.0% out of rural CS taking action and 22.7% of actions by urban CS (overall 16.4%). Though higher case yield among urban CS was due to higher case yields from both urban females and males, the difference was more for males. The relevant figures were : 14.1% (rural) and 20.0% (urban) for females and 10.7% (rural) and 24.4% (urban) for males.

5.12.2 ***How and when diagnosed :*** Out of the 60 TB cases, 60% were diagnosed by PMP, 21.7% by sanatorium, 10.7% by GH and 5% by NGH. **None was diagnosed by DTC**. Overall (for Karnataka), 46.7% were diagnosed during first action followed by 36.7% during second action, 11.7% during third action and 5.0% during subsequent actions and showed a decreasing trend. The pattern differed between rural and urban CS. Among rural CS, the highest proportion (50.0%) were diagnosed during second action followed by 34.6% during first action and 7.7% each during third and subsequent actions. Among urban CS, highest proportion

was diagnosed during first action (55.9%) followed by 26.5% during second action, 14.7% during third action and 2.7% during subsequent actions. It is significant that **84.6% of rural TB cases and 82.6% of urban TB cases were diagnosed during one or two actions** (overall 83.4%). About one third of rural and urban TB cases were diagnosed within 15 days from onset of symptoms. About one-ninth of rural TB cases one-fifth of urban TB cases were diagnosed within 16-30 days of onset. **Within 90 days, about 66% of rural and urban TB cases were diagnosed**. Diagnosis after 210 days was made for 15.4% of rural and 20.6% of urban TB cases. Even later diagnosis (i.e. after 360 days) was made for 7.7% (rural) and 14.7% (urban) TB cases.

5.13 Cost

5.13.1 ***Direct, indirect and total cost :*** Table 77 shows that direct cost of Rs.200-599 was most common (27.2%) followed by Rs.600-999 and Rs.1,000-2,999 (20% each). About 60% had not incurred any indirect cost (62.0% rural and 56.8% urban). Incurring Rs.200-599 came next with as low a figure as 11.3% (12.5% rural and 8.4% urban). Total cost had maximum frequency in cost range of Rs.200-599 (24.0%) followed by Rs.1,000-1,999 (22.7%), Rs.600-999 (18.0%) and 2,000-3,999 (12.3%). Average for direct, indirect and total costs were all higher among urban CS compared to rural CS. Relevant figures were : Rs.1,454 and Rs.1,060 respectively for direct cost , Rs.611 and Rs.369 respectively for indirect cost and Rs.1,940 and Rs.1,309 respectively for total cost.

5.13.2 ***Factors influencing total cost :***Average cost decreased steadily with age from Rs.1,375 to Rs.686 among rural CS and from Rs.1,500 to Rs.800 among urban CS, eventhough percentage spending Rs.1-199 increased with age among both rural and urban CS and those spending Rs.200-599 increased with age among rural CS. Average cost was higher for rural and urban CS living in nuclear families compared to joint families. The relevant figures were Rs.962 and 747 respectively for rural CS and

Table - 77

Distribution of Rural and Urban CS by Direct, Indirect and Total Cost (Karnataka)

Cost Range (Rs.)	Direct Cost					Indirect cost					Total Cost				
	Number		Percent			Number		Percent			Number		Percent		
	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total	Rural	Urban	Rural	Urban	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Nil	1	2	0.5	*1.3*	0.7	134	88	62.0	*56.8*	60.4	1	0	0.5	*0.0*	0.3
001-099	16	4	7.4	*2.6*	6.0	21	8	9.7	*5.2*	8.3	12	2	5.6	*1.3*	4.3
100-199	22	14	10.2	*9.0*	9.8	6	13	2.8	*8.4*	4.5	22	13	10.2	*8.4*	9.7
200-599	54	50	25.0	*32.3*	27.2	27	13	12.5	*8.4*	11.3	46	47	21.3	*30.3*	24.0
600-999	55	13	25.5	*8.4*	20.4	9	6	4.2	*3.9*	4.1	49	11	22.7	*7.1*	18.0
1000-1999	40	39	18.5	*25.2*	20.5	8	11	3.7	*7.1*	4.7	49	35	22.7	*22.6*	22.7
2000-3999	22	20	10.2	*12.9*	11.0	7	10	3.2	*6.5*	4.2	23	25	10.6	*16.1*	12.3
4000+	6	13	2.8	*8.4*	4.5	4	6	1.9	*3.9*	2.5	14	22	6.5	*14.2*	8.8
Total	**216**	**155**				**216**	**155**				**216**	**155**			
Mean Cost			1060	1454	1178			369	611	442			1309	1940	1498

Rs.1,560 and Rs.700 respectively for urban CS. This was due to higher percentage of CS in nuclear families spending Rs.1,000 – 2,999 and Rs.3,000 + and despite percentage of CS spending Rs.1-199 and 200-599 being lower in nuclear families. Average cost was higher for urban CS in families with one earning member (Rs.1,462) compared to those in families with two or 3+ earning members (Rs.1,000 and Rs.1,143 respectively). Percentage spending Rs.1-199 among urban CS increased with number of earning members from 1.9 to 15.9 and for those spending Rs.200-599 it decreased from 36.5% to 25.4%. With increase in highest education level in HH, a decreasing trend was observed in percentage of urban CS spending Rs.1-199 (from 16.1 to 6.8), Rs.200-599 (from 35.5 to 27.1) and Rs.600-999 (from 16.1 to 3.4) and an increasing trend for those spending Rs.1,000-2,999 (from 22.6 to 40.7). Among rural CS, percentage spending Rs.1,000-2,999 was lower among unemployed and students (23.4) compared to housewives (30.8) and employed (32.5). Among urban CS, those spending Rs.1-199 was higher for unemployed and students (18.5) compared to housewives (7.8) and employed (6.9). Among rural CS, percentage spending Rs.1-199 and Rs.200-599 decreased steadily with increase in duration of cough, the former from 34.5 to 6.9 (but for an increase in 53+ weeks) and the latter from 34.5 to 8.9. On the other hand, those spending Rs.1,000-2,999 showed an increasing trend from 10.3% to 39.2%. Among urban CS also, those spending Rs.1-199 and Rs.200-599 showed a decreasing rend, the former from 21.9% to 4.7% and the latter from 53.1% to 20.3% and those spending Rs.3,000+ showed an increasing trend from 6.2% to 29.7%. A similar trend was observed for those spending Rs.1,000-2,999 from 9.4% to 48.3% but for a decrease in the last duration of 53+ weeks to 37.5%. Percentage of rural CS spending Rs.1-199 was highest for SC/ST (21.1) and least for Other Hindus (4.3) with BCs in between (16.5). Those spending Rs.1,000-2,999 was highest for Other Hindus (52.2%) and least for BCs (25.7%) with SC/ST in between (28.6). While those spending Rs.1,000-2,999 were lower for SC/ST (21.8%) compared to BCs (35.7%) and Other Hindus (33.3%),

those spending Rs.3,000+ was more Other Hindus (40.0%) compared to SC/ST (20.0%) and BCs (19.6%).

5.13.3 ***Cost under different cost heads :*** Table 78 gives the average values for direct, indirect and total cost as well as average cost for different cost heads under direct and indirect costs for each action and for all actions together. The averages for direct cost in all columns of the table form about 68% to 81% of the averages for total cost showing that direct cost was the major component of total cost. For all actions together, the average total cost as well as average direct cost were higher in urban areas. This was consistently higher for urban CS for direct cost for each action and for total cost for first and second actions. The major component of direct cost was cost of medicines (overall average for cost of medicines being Rs.844 out of the average direct cost of Rs.1,182) (Fig.26). Next came consultation cost with overall average of Rs.130 followed by travel cost with overall average of Rs.118. Average cost for other cost heads were much less. While overall average cost for medicines (Rs.1,106) and consultations (Rs.148) were higher for urban CS compared to rural CS with overall average cost of Rs.732 and Rs.123 respectively, overall average cost of travel was less for urban CS (Rs.80) compared to that for rural CS (Rs.135). Among components for indirect cost, average cost of wages lost was consistently higher than average cost for substitution of labour for all actions by rural and urban CS except for third action by rural CS.

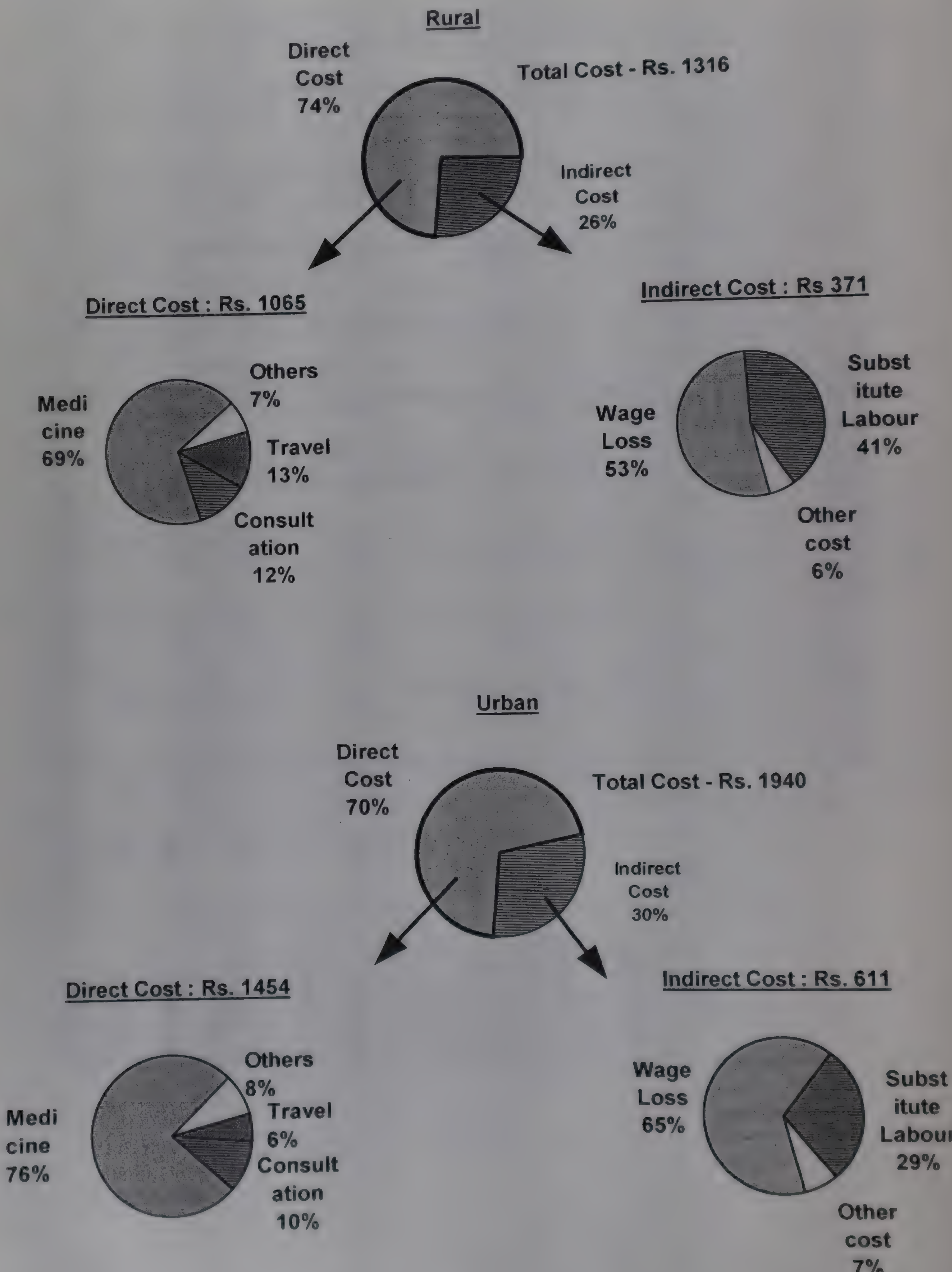
Table - 78

Mean cost under different cost heads for each action by Rural and Urban CS (Karnataka)

Cost Head	(Cost (In Rs.) for Action											
	Action 1			Action 2			Action 3			All actions		
	R	U	T	R	U	T	R	U	T	R	U	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Direct Cost:												
a) Travel	49	24	42	80	63	75	116	87	107	135	80	118
b) Consultations	72	94	79	56	68	60	63	76	67	123	148	130
c) Sputum exam	2	4	3	5	3	4	5	8	6	7	7	7
d) X-Ray exam	7	13	9	18	13	16	13	22	16	24	28	25
e) Medicines	384	634	459	318	602	403	534	567	544	732	1106	844
f) Special Diet	<1	0	NC	0	0	0	0	6	NC	1	3	NC
g) Tonics	11	17	13	14	21	16	18	40	25	27	43	32
h) Medicine Colln.	0	0	0	<1	1	NC	0	0	0	<1	1	NC
I) Check up exam	0	0	0	<1	3	NC	0	0	0	<1	1	NC
Sub-Total	**506**	**768**	**585**	**493**	**785**	**581**	**765**	**801**	**776**	**1065**	**1454**	**1182**
2. Indirect Cost:												
a) Wage loss	47	78	56	39	95	56	42	143	72	68	111	81
b) Substitute cost	34	32	33	33	48	38	57	22	46	53	49	42
c) Others	3	3	3	5	10	6	1	5	2	7	12	8
Sub-Total	**144**	**264**	**180**	**134**	**382**	**208**	**480**	**496**	**485**	**371**	**611**	**443**
Total Cost	**638**	**1011**	**750**	**629**	**1115**	**775**	**1123**	**1077**	**1109**	**1316**	**1940**	**1503**
No.of CS	215	156	-	139	84	-	63	40	-	215	155	-

R-Rural U-Urban T-Rural and Urban(weighte NC-Not calculated

Fig 26 : Cost Incurred under different Cost heads by CS in Rural & Urban Karnataka



Chapter 6
DISCUSSIONS

CHAPTER 6

COMPARISON WITH OTHER STUDIES AND DISCUSSION

6.1 Comparison with other studies

6.1.1 ***A basic problem affecting comparability:*** Chest symptomatics (CS) have a "mixed bag" of symptoms, some of which may be due to more than one disease. Only about 10% of CS attending health facilities (HFs) are expected to be suffering from TB. This percentage may be even lower among CS in the community. Thus, **vast majority of CS have symptoms due to other diseases, at least some of these being amenable for relief or cure by general (non-TB) treatment. With increase in the percentage of CS seeking relief from HFs,** either because of more HFs (government and private, particularly the latter) becoming more easily accessible or because of increase in health consciousness, **there will be some reduction in the number of CS in the community. This will result in regional variations in prevalence rate of CS**. If some of the CS are suffering from diseases with seasonal variations, **there could be seasonal variations** in prevalence rate of CS also. **If some of the CS are suffering from diseases which can have "epidemic" spurts, prevalence rates of CS also can have spurts**. In comparing prevalence rates from different studies, the above factors/ problems have to be kept in mind. However, action taking pattern may not be affected so much by the "mixed bag" nature of CS except probably by those due to epidemic spurts. This is particularly so in areas where vast majority of CS take prompt action in any case because of more easy access of HFs and / or increase in health consciousness.

6.1.2 ***Other problems (self-made) affecting comparability:*** **A serious problem which affects comparability is the lack of uniformity in the definition of CS**. This is partly due to change of definition under NTP from duration of two weeks or more to three weeks or more (the latter

duration being a requirement made by the sponsoring agency for the present study). **Some studies have taken duration of one week and some others all durations together**. There is no way of overcoming this problem now. Another problem is the choice of denominator for calculation of prevalence rates. **Some studies have taken population of age 15 or more because CS belonging to age 15 or more forms the numerator for the calculation.** In the present study, population of all ages has been used as the denominator because for calculation of prevalence rate for all symptoms/ symptoms other than cough both numerator and denominator have to be population of all ages. However, this problem could be overcome by calculating revised prevalence rates using the data on population for all ages wherever it is given in the published paper. **Yet another problem which could affect comparability is the type of investigator used for collecting data**. Different studies undertaken have utilised social investigators, Health Workers, medico-social workers, young graduates/post-graduates (as in the present study), student volunteers, dais, and volunteers from village, all of them either trained and doing similar work or specially trained for the purpose for a short duration. Despite this wide variation, it is likely that the results will not be affected much because, **unlike silent symptoms, prolonged cough will be daily and repeatedly noticed with concern by members of the family and even neighbours. This makes it easy for any investigator of any type to identify any one with cough even by proxy interviews**. One more **problem which can affect comparability is the recall period** used in the studies, which has varied from one month to one year. For the reason stated above, recall of cough may not pose much problem except for two aspects. Since cough can often persist for long periods, the number having cough during a longer recall period may become more due to the cumulative inclusion of episodes which started earlier. Secondly, for longer recall periods, the actual period for which information is provided by interview may be somewhat more or less than the stipulated period. For instance, a recall period of one year may in actual fact also include 10 or

11 months and 13 or 14 months but for a recall period of one month the actual period may not extend much on either side.

6.1.3 ***Prevalence of sickness:*** Prevalence rates for all symptoms and for CS for a number of studies reported are presented in Table 79. The Table shows that **prevalence of all symptoms (which is even a bigger mixed bag) varied from 9.5% to 38.0% with that from the present study having a central position. Prevalence rate for CS** (as per the definitions used) in population of all ages **varied from 1.0% to 14.5%, with the rate from the present study occupying a lower position**.

6.1.4 ***Action taken for relief of symptoms:*** Studies to ascertain action taking pattern of sick persons (SPs) have been fewer in number. Some of them and their main findings are listed in Table 80. While some studies had collected information about the general pattern of action by households (HHs) when some one falls sick, others have collected more specific information about what the SPs have done when they fell sick or both (as in the present study). Evidently, **there was no uniform pattern for such studies also**. Percentage of **symptomatics who did not take action varied from 2.6 to 50.1 for OS and from 14.0 to 52.3 for CS**. This percentage was **generally much higher in the earlier studies compared to recent studies. This was due to the steep increase in the use of private HFs, from 11% to more than 60% in recent studies**.

6.1.5 ***Diagnostic tests:*** Studies which provide information on the diagnostic tests carried out by HFs when CS consults them are very few. The present study shows that **PMPs have ordered sputum examination only during 15% of the consultations made by CS and during a negligible percentage of contacts made with PHC**. One study [21] has shown that **for only 4.2% of 8,987 CS who contacted two PHCs sputum was collected**. Out of six PHCs studied, three did not even give any information on OPD attendance and sputum collected and the other gave information only about number of sputa collected.

Table 79

Comparison of prevalence rates from different studies

Study	Year of Study	R/U	Population	Recall Period	Prevalence rate (%) for	
					All Sympto-matics	CS
Present Study	1997	R	20,209	6 months	**22.9**	**1.4** – Du(21+), Age (all)
		U	20,760		**20.4**	**1.0** – do - - do -
Reference No.						
6	1997	R	1,104	1 year	**31.5**	**4.2** - Du (all) - do -
7	1992-97	R	26,413			**2.3***- Du(7+) –do-, **3.6**-Du(7+), Age(15+)
8	1992-93	R	9,383			**3.6*** -do-, -do-, **5.9** -do-, -do-
9.	1991-92	R	22,250			**2.9*** -do-, -do-, **5.9** -do-, -do-
10.	1989-92	R	18,320			**1.5*** -Du (all) -do-, **2.3** Du(all), -do-
		U	50,000			**3.1*** -do-, -do-, **4.5** -do-, -do-
11.	1988-90	R	18,799	1 month	**11.8**	**1.2*** -do-, -do-
12.	1990@	R	18,395 Age (15+)			**5.8** – Du(14+), Age (15+)
		U	17,409 Age (15+)			**5.5** –do-
13.	1988-89	R	40,657			**5.2*** -Du(all), Age (all), **9.3** -do-, -do-
14.	1986-89	PU	56,293	2 months	**38.0** (Soc.In)	**13.8*** -do-, -do-, **17.7**, -do-, -do-
					32.2 (HW)	**14.5***, -do-, -do-, **17.1**, -do-, -do-
15	1982	R	9,286	1 month	**12.9**	**1.8*** -do-, -do-
16	1982-88	R U	487,654 199,747			**1.3**, -do-, -Age, (5+) **2.2**, -do-, -do- } overall **1.9**
17	1975@	R	22.957	2 months	**24.8**	**11.1** -Du(7+), Age(all); **15.9** -Du(7+), -do-
18	1976@	R	6,705		**9.5**	**3.5*** -Du(all), Age (15+)
19	1976@	R	21,316			**6.8*** -Du(7+), Age (15+)

R- Rural; U-Urban; PU-Peri-urban; CS-Chest symptomatics; DU-Duration in days; Age(all) –Population of all ages ; Age (15+)-Population of age 15 or more; Soc. In-social Investigator;
HW-Health Worker; * -Calculated from data in the published paper; @ - year of publication of paper

Table 80

Action taking pattern from different studies

Study	Year of Study	R/U	Population	Recall Period	No action (%)	% Consulting Private HFs	% Consulting Govt. HFs
Present Study	1997	R	20,209	6 months	**14.6** for CS **4.4** for OS	**70.2**	**35.9**
		U	20,760	6 months	**15.3** for CS **2.6** for OS	**77.6**	**33.3**
Reference No							
6	1997	R	1,104	1 year	**14.3**	**61.9**	**23.8**
20	1996*	R	18,000		**14.0**	**86** (both together)	
11	1989-90*	R	18,799		**15.3**	**37.1**	**38.3**
12	1989-90	R	18,395	1 month	**62**		**54**
		U	17,409		**51**		**46**
15	1982	R	9,286	1 month	**38.4** (of SPs)	**36.4** (of SPs) **40.3** (of HHs)	**37.6** (of SPs) **76** (ofHHs)
18	1976*	R	21,316		**52.3** for CS **50.1** for OS	**11.0** **10.9**	**22.2** **21.9**

R-Rural; U-Urban; HF-Health facility; CS-Chest sympramatics; OS-Other symptamatics
SPs-Sick persons; * - Year of publication

6.1.6 ***Other aspects covered:*** The present study has covered many other aspects which give an exhaustive picture of behaviour pattern of CS and other symptomatics for comparison. Of particular interest and importance is a study of factors which may influence prevalence rates for CS and other symptoms, number of actions taken by CS, type of HFs consulted (at primary, secondary and both levels) along with the number of contacts made with each and cost incurred by the CS. **Such a coverage of various aspects of behaviour pattern of symptomatics has not been attempted by other studies** except for factors which may influence prevalence of symptomatics which was studied in great detail on a very large population [16] and to some extent in a pilot study[6]. In the present study, detailed information became available for reportedly diagnosed TB (those CS who were told by HF contacted that they were suffering from TB) and self-suspected TB cases. Since the main thrust of the present study was on behaviour pattern of CS these have not been analyzed in detail.

6.2 Discussion

6.2.1 ***General Objectives of the study:*** The present study has been quite successful in meeting its general objective of collecting detailed information on the behaviour pattern of CS in rural and urban populations. It has also provided information on the behaviour pattern of other symptomatics to provide a background for understanding the behaviour of CS. Eventhough study of prevalence of CS and OS was not an objective of the study, detailed information including factors which have an influence on prevalence has been collected and provided. Also added is information on prevalence rates for reportedly diagnosed and self-suspected TB cases in the community. All these could help to understand better the size, nature and other aspects of symptom prevalence.

6.2.2 ***Special objectives of the study:*** The study has provided lot of information on which providers the CS seek, how early and how often (the first specific objective of the study). Detailed information has also been given about costs incurred by CS for services and its break-up into direct and indirect costs as well as under different cost heads. **Direct cost is the major component of total cost. Among its components the outstanding major component is cost of medicines which is way ahead of the other components. Cost of consultation was a poor second and cost of travel a poorer third**. Cost of diagnostic tests was negligible. This is not surprising because most of the health facilities contacted by CS did not order sputum or x-ray examination. The question of duplication of investigations (one of the specific objectives of the study) hardly arose. Most of the CS were not satisfied with the services received because these mostly provided only partial relief of their suffering. Thus, their perception of the benefits of the services provided (an objective of the study) was very bleak. For the same reason, **they had availed of multiple provider services with the hope of getting complete relief from their suffering. Despite going from door to door, many of them did not get adequate relief. Neither did they get any advice by way of referral to proper services. These had led to confusion in their minds and disillusion.** They were hardly in a position to give any suggestions for improvement. A more common suggestion was the need to provide free services of better quality. This study has investigated the extent to which some factors influence not only the pattern of behaviour of CS (another objective of the study) but also how they have influenced the cost incurred.

6.2.3 ***Predominance of PMP:*** **One of the important findings of the study is the confirmation of the increased predominance of PMP in the health services of today**. But a new aspect which has become clear now is that **most CS who had contacted PMP for their first action did not contact another type of HF despite not getting relief from their**

suffering. A large percentage of them had contacted PMP for even their second and third actions (may be another PMP) which indicates confusion in their mind and lack of proper medical advice of referral during earlier actions. **This has serious implications for the TB programme** as will become even more clear when other aspects of this problem are considered.

6.2.4 ***Contribution of PHC - a paradox :*** Mysore district was selected as representative of districts which were comparatively the best with regard to availability of government HFs and Raichur district as representative of districts which were comparatively the worst (with regard to availability of) Government HFs. PHC is the most important component of government HFs with regard to primary health care. One could, therefore, expect that services at primary level will be better and more popular in Mysore district. But percentage of CS contacting primary level HFs only was 45 in Mysore compared to 55 in Raichur. **Those contacting PHC only were 11.4% and 6.9% respectively. Contribution of PHC (either alone or in combination with other HFs) to the services availed of by CS was only 25%** eventhough, as could be expected, it was better than in Raichur district. **For first action**, for which convenience was the most common reason for choice, **only 25% contacted PHC**, though it was negligible in Raichur district which had the reputation of having one of the worst government health services with regard to availability. This was so, most probably, because 50% of Raichur CS has to travel only less than 1 km for first action as against 8% by Mysore CS. Further, 60% of the reportedly diagnosed TB cases were diagnosed in Raichur district during first action compared to only 37% in Mysore district. About 40% of such cases were diagnosed within 15 days from the onset of symptom in Raichur compared to about 30% in Mysore district. Thus, contrary to expectation, **with the comparatively best government HFs (with regard to availability), more of Mysore CS had to travel longer distances to get fewer cases diagnosed and that too after longer intervals from**

onset of symptoms. This could lead to a paradoxical conclusion that having better availability of government HFs is a serious disadvantage for the CS. Where availability of government health services are poorer, PMPs have come to fill the vacuum with the net result that CS have benefitted (may be other symptomatics also).

6.2.5 ***Influence of some factors:*** Influence of sex, age, type of family, family size, religion and caste, occupation and highest education level in HH on (a) prevalence rate, (b) number of actions taken, (c) HFs contacted and (d) total cost incurred were studied. **Increasing or decreasing trends or substantial differences were observed, particularly for different age and education groups. But, these did not show uniform patterns.** For example, while an increasing/decreasing trend was shown in Mysore / Raichur, it was not so in the other district. Similarly, in some instances, trends were observed in rural or urban area but not in both. **This mixed or non-uniform patterns may indicate that these factors by themselves may not influence much but do so in the presence of some other factors.** The number of CS in rural/urban areas in each district were not large enough to provide adequate number in the sub-groups which reflect the above factors. **It may be worthwhile to study these in larger population of CS so that these factors also could be cross-classified to provide a more reliable picture of their influence and interactions.**

Chapter 7
CONCLUSIONS & RECOMMENDATIONS

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 Strengthen involvement of PMP in TB Programme

It is well known that the major burden of providing curative health services in India is borne by private medical practitioners (PMPs). **The present study has not only confirmed this but also shown that the contribution of PMP (either alone or in combination with other HFs) to the services provided to CS could be as high as 67%** (71% in Raichur district and 65% in Mysore district). **Among the reportedly diagnosed cases, 60% were diagnosed by PMP**. But, the **crux of the problem is reliability of diagnosis and efficacy of treatment by PMP. Since only for 23% and 26% respectively of actions taken by CS, sputum and x-ray examinations were ordered, it is likely that PMPs had resorted mostly to clinical diagnosis**. Nearly 50% had been diagnosed during the first action and 83% during first and second actions. Further, 35% were diagnosed within 15 days from the onset of symptoms and 52% within 30 days. These two together further questions the quality of diagnosis. This study could not throw any light on the efficacy of treatment provided by PMP. None of the CS had check up examination during or after treatment. But the fact that hardly any CS had stated that they were cured indicates that even a temporary benefit (not cure) which could be provided by good treatment of short duration could not be achieved. Another significant observation is that only 14% of CS had stated that their choice of even third action was because of referral by doctor. Evidently, **PMPs do not refer CS to specialized HFs like DTC and sanatorium even after CS approach them repeatedly without relief of their symptoms**. In view of the above, the line of action for improvement of the TB programme is very clear. Since an overwhelming majority of CS contact PMP and that too quite early, **it is essential to involve them properly and completely to strengthen the programme. The quality of diagnosis and treatment provided by them have to be improved with stress on sputum examination for the former and emphasis on regular actual consumption of the proper drug regimen for the required period for the latter**. They **should be made fully and**

continuously aware that (a) over diagnosis which leads to unnecessary suffering and agony due to social trauma and to supressing or delaying the actual treatment required to counter the real disease he is suffering from and (b) improper anti-TB treatment which does not help in complete cure and which can lead to development of resistance, are both social crimes. No doubt, some attempts have been made or considered to involve PMPs in the programme. There is an urgent need to set up a Task Force to **review the action taken so far, assess their strengths and weaknesses and suggest suitable steps to have effective and continuous involvement of good quality by PMP**. This Task Force should comprise of medical and non-medical experts from government and voluntary organisations with adequate field experience.

7.2 Relevance of PHC

PHC is the main pillar for all health programmes including TB programme, which can lead to control of TB. **It is important that CS first contact them soon after the onset of symptoms so that their sputa can be examined and anti-TB treatment started**, if necessary. But only 16% of CS contacted PHC for their first action, 7.4% for second action and 11.1% for third action. In one study[11] carried out in 1989-90, the first contact for 56% HHs was government institutions (most of which were most probably PHCs). If this represents the contribution of PHC to the services provided about 10 years back, it is evident that **there has been a substantial reduction in the contribution of PHC**. An analysis of reported figures[22] shows that **there was 40% reduction in sputum examinations by peripheral health institutions (mainly PHCs)** in Mysore district (one of the best districts with regard to availability of government HFs) during the period from 1989-90 to 1994-96. Even in Raichur which was considered to be a district with a poor provider system, **there was a further deterioration of 15% during the same period**. These also indicate that the contribution of PHC was reduced (that too substantially in one of the best districts). **Among repeatedly diagnosed TB cases, only 3% were diagnosed by PHC. Reasons for this poor and yet decreasing contribution of PHC to**

services provided have to be ascertained and effective steps taken to rectify the situation as soon as possible. Two points are relevant in this connection. One is that the only suggestion for improvement given by some CS was the need to provide free service of good quality. PHC doctors themselves and the symptomatics and local leaders have told the field team of the present study that the facilities available at PHC were thoroughly inadequate. The symptomatics had also told that since they have to pay in any case, they preferred to contact PMP which was more convenient than PHC because of saving in time and travel cost. In the present study, CS contacting PHC had reported that they had incurred cost for services rendered by PHC. **The myth of free service at PHC is perhaps well known to all but bypassed in discussions regarding improvement of services. The fact is that relevance of PHC is very doubtful. Thus the main pillar for a successful TB programme is becoming more and more irrelevant**. It is high time that the **relevance of PHC is closely studied with an open mind and a decision taken about restructuring it to make it more effective and thereby restoring its clear claim to be pillar of programme or build other structure to fill the need for a pillar (or pillars) for the programme**. There is no point in closing our eyes and wishing away the problem.

7.3 Failure of DTC

This study has covered a population of 40,000 of which 20,000 each were from rural and urban areas. **The contribution of DTC for providing services to CS was negligible even in urban areas. This was so despite the fact that two of the four towns from which the study population was selected had DTC there**. Number x-rayed at DTC (which is close to or is the **number of CS contacting DTC) decreased by 40% during the period from 1988-90 to 1994-96 according to the reported figures[22] for Mysore district and by 60% for Raichur district and show a steep fall in the number of CS contacting it**. It is also significant that **none of the 60 reportedly diagnosed cases in study were diagnosed at DTC**, eventhough 10,000 of the study population with more than 100 CS were living in five wards of the DTC town. This shows a serious

deterioration in the curative functions of DTC. Even more important is its efficiency in performing the programme development and supervision functions in the entire district. **The very low contribution of PHC in the services provided to CS is a sad reflection of the efficiency of DTC with regard to the above two very important functions for which DTC is solely responsible**. An in depth study of NTP[23] in 1988 had observed that DTC is hardly carrying out its functions of programme development and supervision. This was mainly because the leader of the DTC team was only interested in clinical work and in any case could not function effectively due to lack of adequate support from the Chief Medical Officer of Health (CMOH) of the district and hierarchical conflict between CMOH and the District Tuberculosis Officer. To solve these problems, that **study had recommended that the programme development and supervision functions of DTC may be handed over to a Deputy CMOH of the district who has both administrative jurisdiction and proper attitude to these two functions which have been his main functions with regard to other health programmes**. There is an urgent need to **reconsider this recommendation in the light of further deterioration in these two functions under the programme and the almost total failure of DTC in providing services to CS even in its own town and to take adequate steps to rectify the situation.**

7.4 Health education

Among bacteriologically positive TB cases, 95% were aware of symptoms and about 50% had taken action[1, 24]. The situation was the same among CS with 52% not taking action[19]. These studies were conducted before 1983. In the present study and other recent studies[6,11,20] percentage not taking action was much less (about 15%). In the present study, about 40% had taken action within 7 days and 67% within 15 days. With this change in the situation, **the need for health education of the CS is much less** and such health education activities may not be cost-effective. But a new type of health education activity is required. When asked about the reason for choosing HF for taking action, **none of the CS had stated that they were advised by local leaders, social workers or NGOs. Thus, these groups with local influence had not helped by advising CS**

about the proper type of action to be taken, even for subsequent actions. It is likely that they were also not contributing to the programme by advising TB patients in their areas about the need for regular and timely consumption of anti-TB drugs without any interruption for the prescribed period. May be, they themselves were not aware of these. Those who were aware may not have realised how they can help or were not motivated enough to do so. As stated earlier, **most PMPs had not referred CS to the proper health facility. It is these groups that require health education now** so that they can actively co-operate with the programme. A proper **plan of action for this has to be developed and concerted efforts made to implement this plan as soon as possible. In doing so, there is a need to adopt a contextual approach which can take into account regional, social and cultural variations in the country**.

7.5 Voluntary efforts and community involvement

Group discussions by the study team during field work has revealed that **voluntary efforts and community involvement were conspicuous by their absence**. Whatever activities are taking place for this purpose are probably confined to state level with minor extensions here and there. Voluntary efforts and community involvement at grass root level are crucial for the success of the TB programme, particularly the latter. **This is an area where innovative ideas have to be encouraged, particularly those suggested by lower and middle levels who are better exposed to grass root level realities**. A Task Force could be set up to **start the necessary dialogues with these levels and to encourage them to come forward with their innovative ideas for pilot studies**. Effective and feasible ideas so selected could be tested on a larger scale before its wider implementation in other areas, keeping contextuality in mind.

7.6 Research

So far, isolated studies have provided rather sketchy information about different aspects of the programme including behaviour aspects of CS and TB cases and

the type of interventions required. It need hardly be emphasized that **more uniformity in definitions, design of studies, and their execution are very important to provide valid comparisons**. It is high time that the major institutions carrying out programme oriented research, ICMR, Governments of India and concerned states and WHO meet together to formulate guidelines etc., for more uniform conduct of research (refer para 6.1.2). Needless to say, **more importance has to be given to the type of operations research which can help to make the TB programme more efficient and effective and also help to evolve the programme further, all these in a contextual manner**. It has to be realized that in a vast country like India, national programmes have to be modified or replaced by a federation type programme which alone can fill the needs of regional, social and cultural groups, keeping the national goals in mind. **Concerted co-operative efforts will be required to have this type of change in approach as well as for moving towards implementing solutions which take care of both regional and national needs**. About 10 years ago, the in depth study of NTP[23] had **recommended that "regional institutions may be set up to carry out research, training, monitoring and evaluation in different parts of the country" and suggested an outline for such research. These and the reasons which stood in the way of implementing this recommendation could be a starting point for meaningful discussions and for formulating a plan of action.**

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